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ASH'S CANADIAN MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

7 (5)
35-40

CLAUDIUS ASH, SONS & CO. LIMITED.

7

CANADIAN BRANCH,

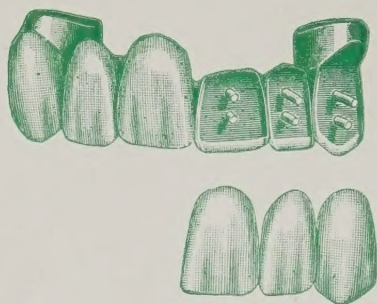
11-13 GRENVILLE ST. TORONTO, CANADA.

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LONDON, W. ENGLAND.



Dimelow Detachable Facings



Will give **You** better results than
any other detachable teeth. ❁ ❁

W H Y ?

Because of their **Greater Strength**
as you can tip them **Heavily** with
gold and still remove them before
soldering.

The more conservative bridge
workers who have stood aloof
from replacable teeth are to-day
using **Dimelow's** with security to
their reputations and at greatly
reduced cost.

If you have not received a booklet
a request postcard will bring you
one.

Claudius Ash, Sons & Co., Ltd
Sole Agents

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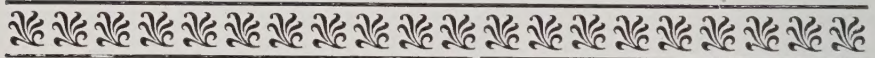
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A good word is an easy
obligation, but not to speak
ill requires only our silence,
which costs us nothing.

Tillotson



Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, OCTOBER 1, 1913

No. 1

THE CURE OF MOUTH-BREATHING.*

By W. W. James, F.R.C.S., L.D.S.

The ill-effects produced by nasal obstruction and mouth-breathing are so significant that in all branches of medical science the establishment of normal respiration is regarded as of the utmost importance. At the present time the procedure for the establishment of nasal respiration consists of operative measures followed by breathing exercises, and, of course, voluntary effort by the patient. In many cases this may suffice, but in a large number mouth-breathing continues. The majority of failures are due to the persistence of a habit which, although controlled during the day, recurs at night when voluntary effort is impossible.

Those of us who are responsible for the care of the mouth have little difficulty in detecting a mouth-breather. The effect on the mucous membrane in the front part of the mouth is characteristic: in children gingivitis is present where the tissues are exposed to the air; later, pyorrhoea alveolaris becomes established, as is seen by adults who are mouth-breathers. Imperfect development and deformity of the bone of the face is well known in mouth-breathers; the maxillae are chiefly affected, one of the most frequent characteristics being protrusion of the incisor teeth.

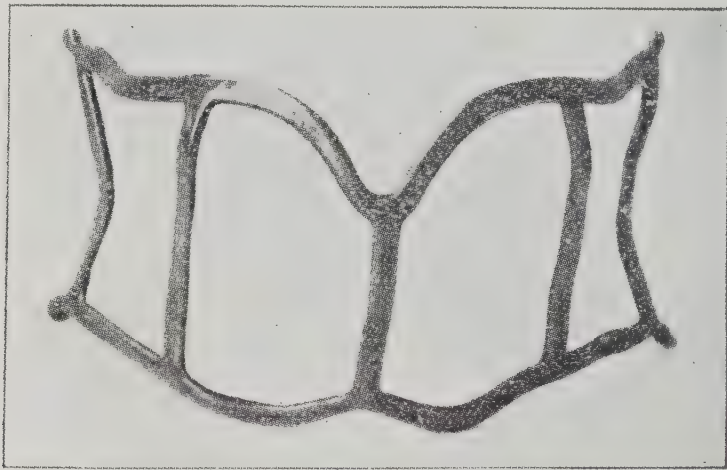
The difficulty of dealing with patients who were able to breath through the nose, but whose mouths clearly indicated that they continued to breathe through the mouth, led me to attempt breaking the habit of mouth-breathing at night which was the cause of the trouble. For a considerable time I used strips of strapping, which were placed across the mouth, the position of the strapping being varied from night to night. In one or two cases bandaging was also used. This method was successful in many cases, although trying and irksome to the patient. The apparatus about to be shown was tried, and has

* From the Proceedings of the Royal Society of Medicine. By permission of the Council of the Odontological Section.

been used in a number of cases; the success in the majority of instances has been so marked that it seemed to be of sufficient interest to bring it to your notice.

The apparatus consists of a wire frame, over which thin sheet rubber (dental rubber-dam) is stretched; it is placed inside the lips and cheeks, resting upon the outer surfaces of the teeth and gums. The frame is made to a model. An impression is taken in composition, which should not be made too soft, as a sharp impression is not required. It is better not to use a special tray except for small children, when the taking of the impression may have to be carried out quickly: a tray would have to be so

Fig. 1.



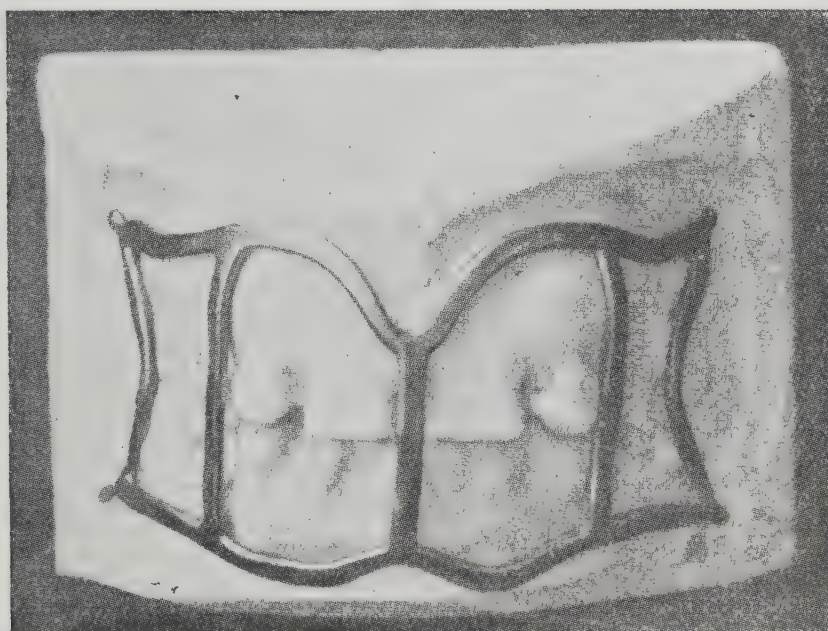
Frame of Apparatus to prevent Mouth-Breathing.

uncomfortably large for the patient in order to obtain a satisfactory impression; in children one may have to be satisfied with what one can get.

The following method is given in detail, as an accurate model is essential for success. The teeth are occluded, the impression composition is rolled into a sausage-like shape and is inserted inside the lips and cheeks, it is then pressed against the teeth and upwards and downwards into the sulci; the lips are closed over the impression material. The operator, standing behind the patient, places a hand upon each cheek, with the fingers over the lips; uniform pressure is made over the impression material. Cold water is then syringed inside the cheeks until the composition is quite hard; the water is allowed to escape into a bowl, the head being tipped forwards. The removal of the composition may cause the ends to be bent inwards; this is the reason why a special tray may be necessary in children. The impression should extend as far back as the first molars, and to the full depth of the sulcus of each jaw. The composition can be replaced after being hardened in cold water if there be any doubt of its accuracy; on this account too sharp

an impression is undesirable. The model is poured, a zinc cast and a lead die prepared. The shape of the frame is marked out on the model; the outer wires are fitted, soldered and struck; the vertical supporting wires (usually three in number) are also fitted, but soldered at one end only, the other end being slightly longer than is required; it is then struck; finally, the other ends of the wires are soldered and the whole frame struck up. The exact shape of the apparatus and the position of the wires are shown in the illustrations. The upper horizontal wire is placed near the top of the sulcus, but slightly lower at the ends; in the middle line a depression corresponding with the fraenum labii must be made. The frame is chiefly supported by resting upon the projecting teeth and alveolar mucous membrane of the maxillae. The lower horizontal wire should not be carried to

Fig. 2.



Frame in position on Model. (The downward bend for the fraenum can with advantage be carried lower.)

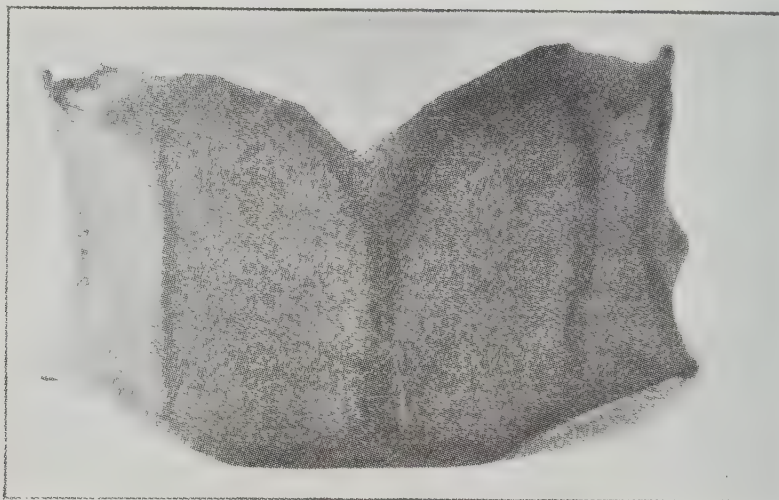
the lowest part of the sulcus, for although it should fit it cannot do more than rest against the tissues of the mandible, as they are more or less verical.

The chief discomfort is from rubbing; this is prevented by making the frame large enough to be steady, and by avoiding bony eminences, the horizontal wires being carried either above or below them. The frame should reach almost as far back as the first molars, and the horizontal wires approximate slightly to one another, in order to allow the angles to have rounded projections over which the rubber can be stretched. On no account should the frame extend beyond the area of accurate impression, as otherwise the tissues are almost certain to be rubbed. The frame should be large, chiefly to keep it steady when worn, but

also to prevent displacement from the mouth, which can easily occur if the apparatus is small.

The wire used in most cases has been German silver, gilded after completion. Fine wire makes a lighter frame, which is less noticed, but it is very easily bent and is then uncomfortable. Dental alloy wire has been used, also gold. An attempt to make a vulcanite apparatus was not successful, as the parts were so easily chafed by it. At present the size of wire used is thicker than formerly. The wire was drawn down between rollers in order to give an oval contour; a draw-plate would probably be better for this purpose. When used the rubber is stretched over the frame and the surplus trimmed off with scissors. A supply of rubber is given to the patient, who has directions to change it frequently. If the rubber is stretched too tightly it is apt to tear and may press upon the teeth, causing them to become tender.

Fig. 3.



Frame with Rubber stretched over it.

The apparatus may be worn during the day if it is thought desirable, as in one of my patients who was a thumb-sucker no rubber was put on during the day, but the frame alone effected the purpose of preventing the thumb being inserted. Ordinarily the apparatus should be used at night as has been stated. When the apparatus is in position mouth-breathing is absolutely impossible, and the patient is compelled to use the nose for respiration.

The patient may find it impossible to use the apparatus if nasal obstruction exists, in which case a surgeon should be consulted. Some discomfort is usually felt for one or two nights, and then the inconvenience should be very slight; several patients were able to sleep comfortably on the first night. The comfort of keeping the mouth and throat moist made so great a difference to some individuals that they slept better, and in consequence prefer to have the apparatus. One patient says he is so attached to

his that he can hardly sleep without it; he suffered from a chronic sore throat, which has improved in a remarkable manner. Besides improvement in the condition of the mouth and throat, the nose also benefits; chronic nasal catarrh is markedly diminished: one patient has been more or less free for nine months. With the use of the apparatus the improvement of the nasal condition should be progressive. An adult who had used strapping, and later an apparatus, was able, for the first time in her recollection, to take a full, deep breath through the nose.

The length of time that the apparatus must be worn varies. It should be continued until normal respiration is quite established. The patient is then allowed to omit it for a night, then alternate nights, followed by its use on one night in three, then one in four, and so on. The apparatus should certainly be continued where the conditions of gingivitis and pyorrhoea alveolaris are still unsatisfactory, for every possible effort is necessary for their correction, and a return of the mouth-breathing for a short time may be most harmful. The improvement of these conditions is quite remarkable in some patients.

By preventing mouth-breathing in children who have some nasal obstruction, but insufficient to demand an operation, the nasal respiration may be so improved that surgical interference becomes unnecessary. This certainly appears to be the case in two or three of my patients.

In one of these children, after wearing the apparatus for two nights it was not used on the third night, as the mucous membrane had been injured by rubbing. On the night it was omitted the mother said the child's mouth was closed and she was breathing through the nose, but the mouth-breathing occurred on the night following.

This apparatus can also be used to correct conditions which result from mouth-breathing; it is possible to arrange the rubber in such a way that pressure can be brought to bear upon the incisor teeth to correct protrusion. My experience has so far been limited to correction of cases where premolars have been removed, but the possibilities of exercising the function which is normal for the lips in moulding the dental arches seems to be highly probable. There appears to be a valuable use for the apparatus in orthodontics. In one of my cases the frame was made without cross-bars, merely the outer wires; studs held the rubber, which was put on with very little tension: the teeth were carried back in a most satisfactory manner. At the same time the gingivitis, which was quite marked, was so improved that the mouth appeared almost normal. In another case, where the incisors were separated, the central vertical bar was divided, allowing the rubber to press on the tips of the teeth; the bar has been shortened gradually. The case is still under treatment. Its early use should prevent some of the changes in the dental

arches; protrusion of the incisors might certainly be checked, and very probably contraction of the arch prevented.

The uses to which the apparatus can be applied would suggest the name of "artificial lip," for some of the functions of the lips are represented to a considerable degree by it—for instance, the closing of the mouth and the moulding of the dental arches in front. The apparatus may undergo modifications or be replaced, but the principle applied should, I think, be of value.



The New Instrument Mosley's Angle Holder

Illustration and full description in December issue.

A perfect holding device and operating handle to take the following extra short instruments—

Chisel

Burnisher

Thin Approximal Instrument

Orthodontia Wrench

Broach Holder

Any of these instruments held properly at any angle or Slant.

Stock is ready for instant distribution

Price of Holder and Instruments


\$3.75

Claudius Ash, Sons & Co., Limited

Mouth Mirrors



Since advertising our CONE SOCKET MIRRORS at 25 cents each in previous issues, we have sold many hundreds of them.

We want to attract your attention also to our

Metal Handle Mirrors

30 CENTS EACH.

We have a fine stock of these and can supply them either PLAIN or MAGNIFYING in the various sizes.

A request postal will promptly bring one to you.

Claudius Ash, Sons & Co., Limited



Ash's Best Quality Mouth Mirrors

These Mirrors have best lenses made with standard Ebony Handles.

Stocked in both Plain and Magnifying Types and in usual sizes.

Price 90 Cents

When Buying a Quantity of Dimelow Detachable Facings

You receive a greater result in the quantity of facings for a given sum of money than with other teeth.

You do not lock up a considerable sum in backings. You make them up as you require them at a minimum cost of both time and material and every laboratory is already equipped with all the necessary tools.

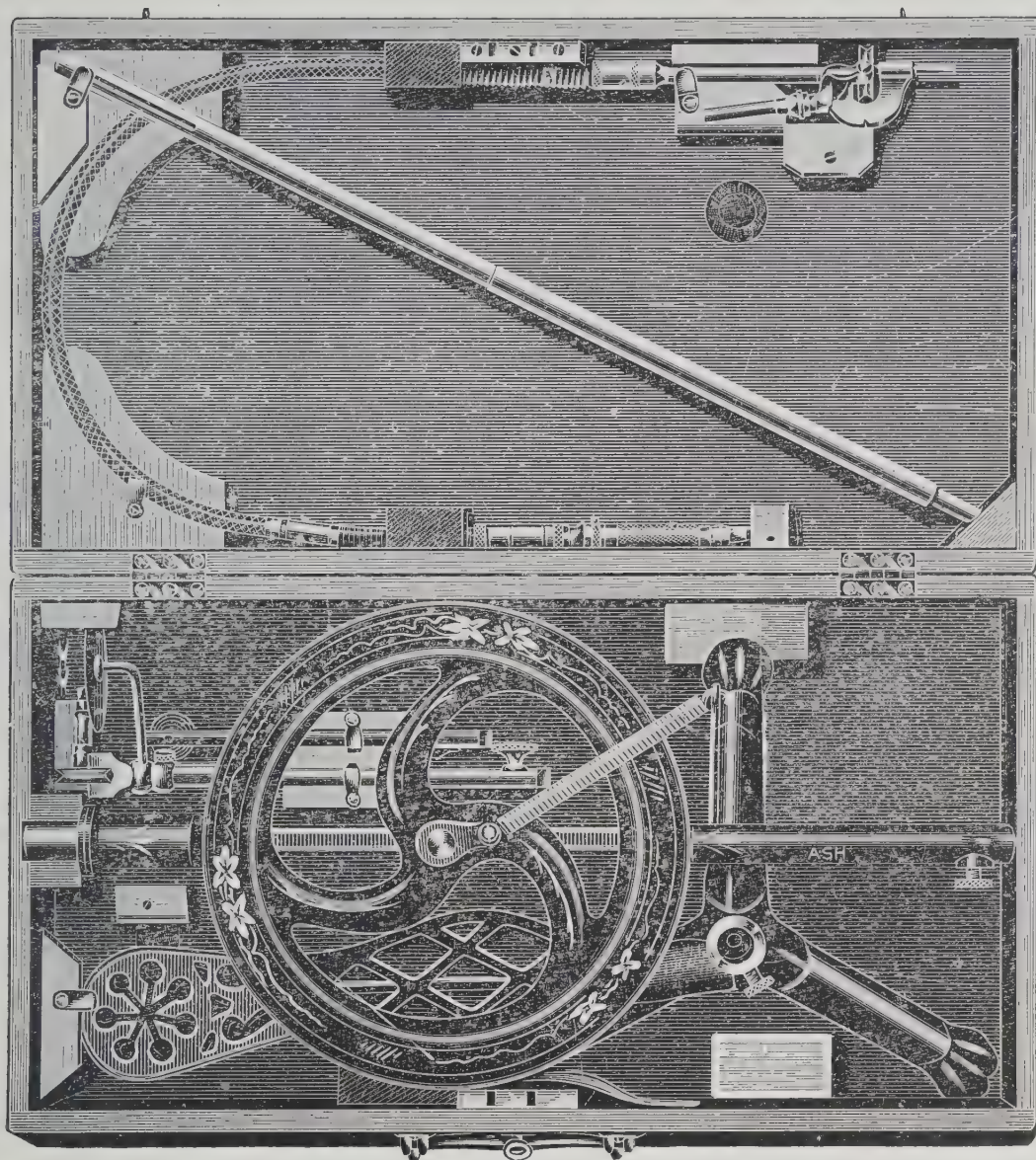
Send a mail order for Dimelows for your next case.

PRICES

Per Tooth	25
108 Teeth	25.00
228 Teeth	50 00
Anterior Staples	.05
Posterior Staples	.10

Claudius Ash, Sons & Co., Limited

Ash's Travelling Engine



The illustration shows this ideal equipment boxed in its neat travelling case.

The box is neatly finished and equipped with servicable handle and lock.

This engine can be put together or dismounted in a minute or two without the aid of either screw driver or spanner.

The total weight of equipment including lathe attachment is 32 lbs.

The engine is a perfect running apparatus and fully guaranteed.

With No. 7 H.P. Duplex Spring and Slip Joint	-	\$28.50
With above equipment and Lathe Attachment	-	37.50

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..GOLD SCRAP..

WE have been many times requested by dentists in all parts of the Dominion, to establish our own plant for the refining of gold scrap. It has been time and again represented to us that the dentists wanted a reliable, general dental manufacturer to take up this work in order to give both security and prompt and efficient returns

¶ We are pleased to state that we have now installed this plant and are prepared to receive your scraps and cuttings.

¶ If your sendings are valuable, forward them to us by prepaid express as there is no guarantee of safe delivery by the mails.

¶ In all cases please advise us by mail of the gross weight of your scraps, as we must verify the same immediately on receipt of the package. Also state whether you desire the returns in cash or 22 k. plate.

Claudius Ash, Sons & Co., Limited

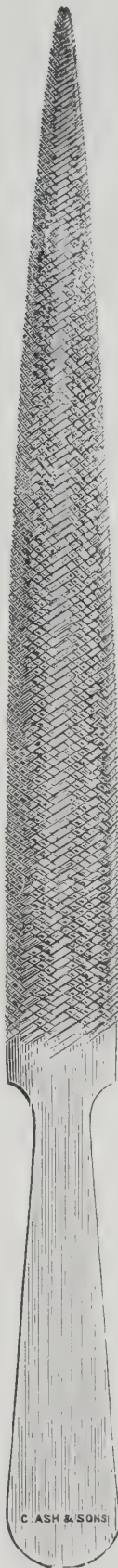
Stub's Files



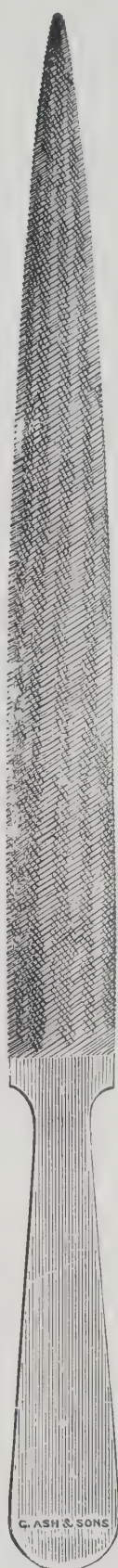
Rasp



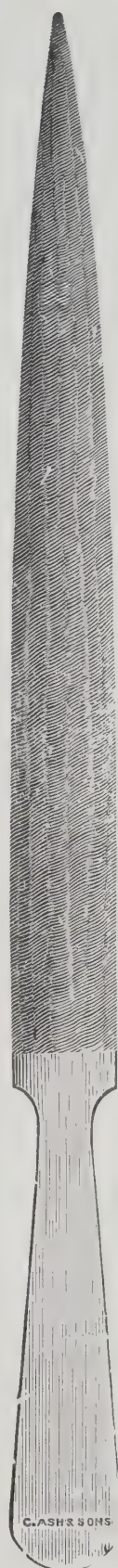
Ex. Rough



Rough



Bastard



Smooth

Dr. Galloway's Suction Device

FOR

Lower Dentures Only

*Patented in the United Kingdom and in
the United States, Other Patents pending*

Dr. Galloway's Suction Device has been specially designed for lower dentures, and the need of such an aid has long been felt.

Its practical efficiency has been thoroughly tested by lengthened wear in the mouth.

It consists of a curved metal bar which has countersunk holes in it, four pins for securing the bar to the plaster model, and a vulcanized strip of specially prepared rubber.

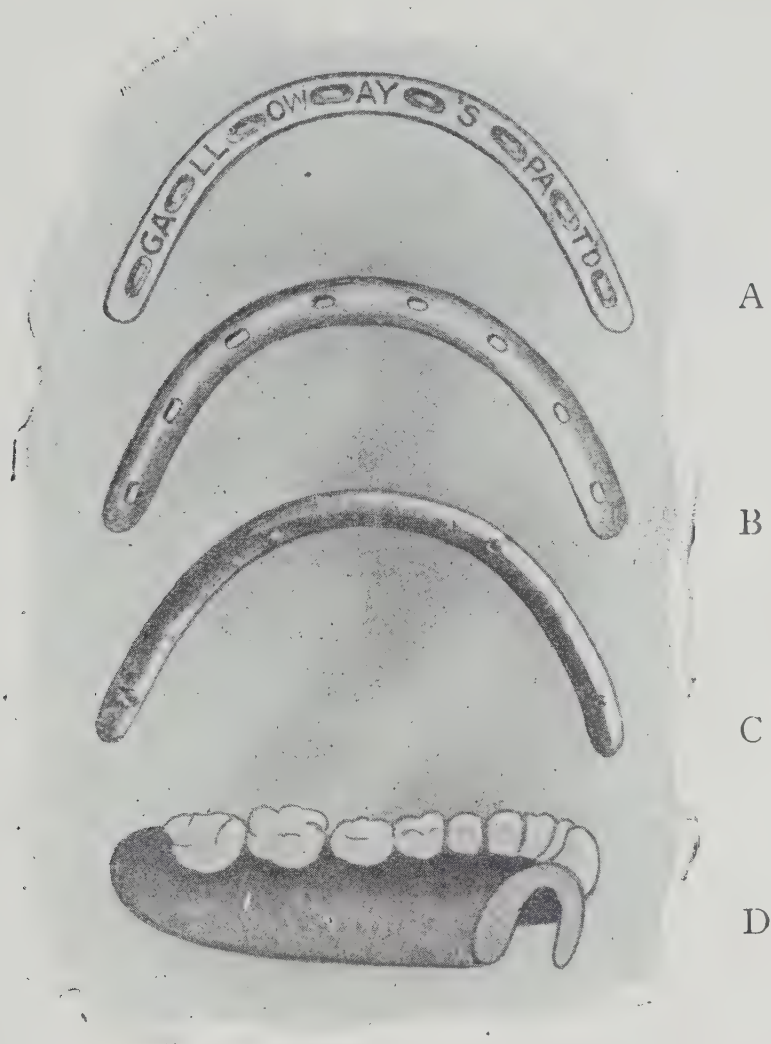
The rubber strip is held in position in the denture by the suction which is produced by the small holes on the curved surface, and to the gum by the suction through the larger holes on the flat surface.

The strip can be removed and replaced by the patient within half a minute.

There is enough suction produced, through the holes in the rubber strip, to hold the denture securely to the gum, without any discomfort to the patient.

Galloway's Suction Device—Continued.

FIG. 1.



Natural size.

A and B show the flat and curved surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Section of denture which shows the rubber strip in position.

PRICE - - - - \$1.00

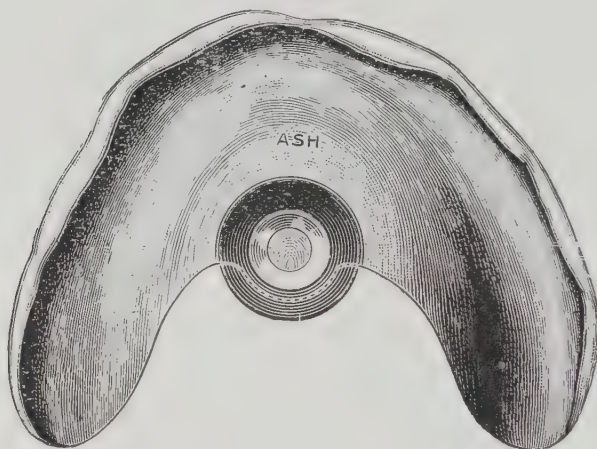
Claudius Ash, Sons & Co., Limited

Rauhe's Improved Suction Disc for Vulcanite Dentures

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY,
BELGIUM, THE UNITED STATES, ETC.

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental

rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25
Aluminum-Alloy Stud with 3 India-Rubber Discs	each	.50
	per half doz.	2.50
Extra India-Rubber Discs, any size	per doz.	.30

Claudius Ash, Sons & Co., Limited

SOLE AGENTS

Rauhe's Suction for Cast Aluminum Dentures

In this Suction, Dr. Rauhe of Dusseldorf has given us the most successful device for Cast Plate retention yet produced.

It is made with the scientific exactness and care that have characterized RAUHE'S SUCTIONS for Vulcanite Dentures.

The Cast Aluminum Suction is a simple one to attach, and is highly satisfactory

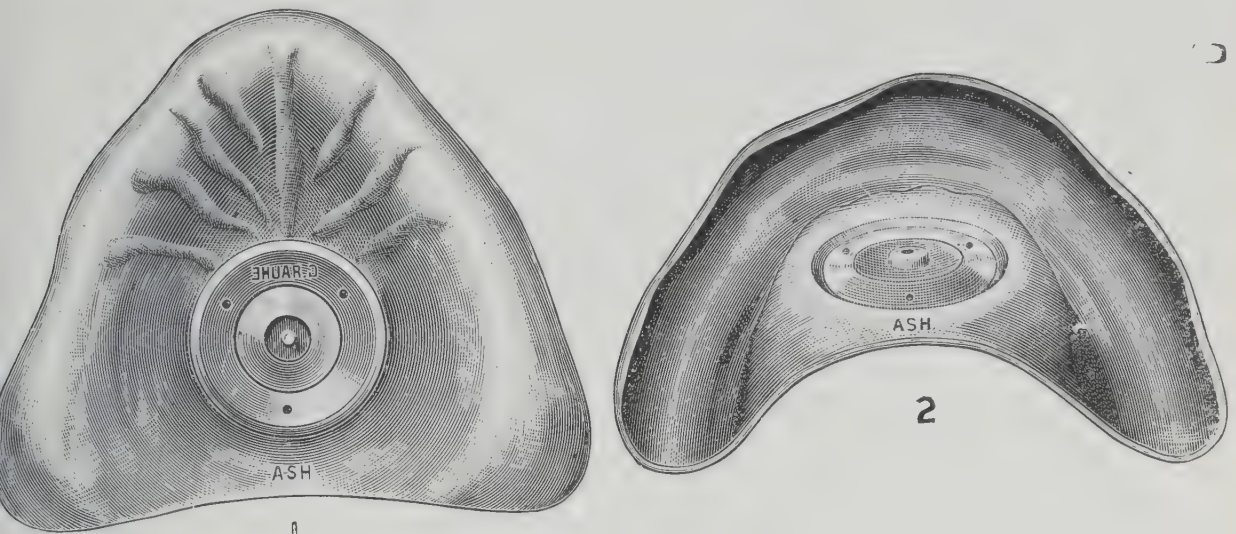
Price - - each 50

In lots of half dozen - 2.50

FOR DESCRIPTION SEE NEXT PAGE

Claudius Ash, Sons & Co., Limited

Rauhe's Aluminum Alloy Suction Discs FOR CAST DENTURES

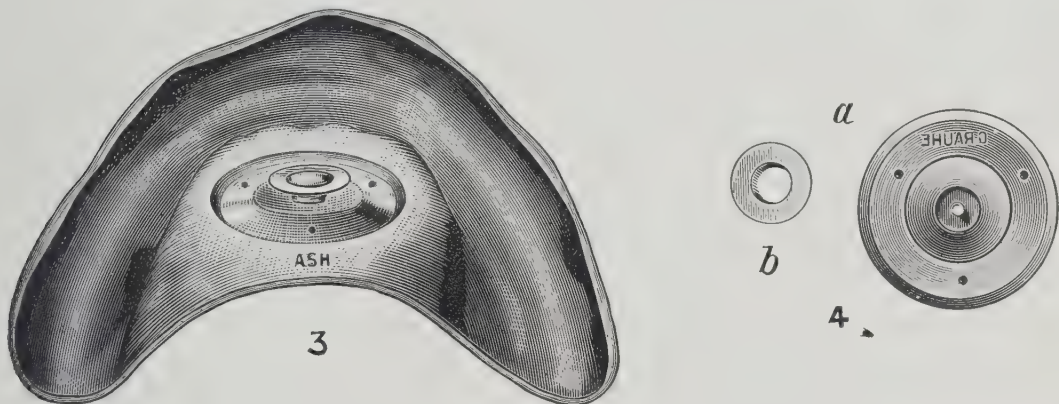


1
SHEWS METAL FORM MOUNTED ON MODEL

DIRECTIONS FOR USE

- I. Shape Metal Form (Fig. 4) to Plaster Model with fingers, and secure it in position with the small pins which are supplied with the suction.
- II. Mount the Wax Plate over the Metal Form and gently press it into position with a soft sponge dipped in warm water.

After the wax plate has been reinforced with Coating and Embedding material, it can easily be removed from the Model. Upon removal, a stud-like projection in wax is left in the centre of the metal form, as shewn in Fig. 2.



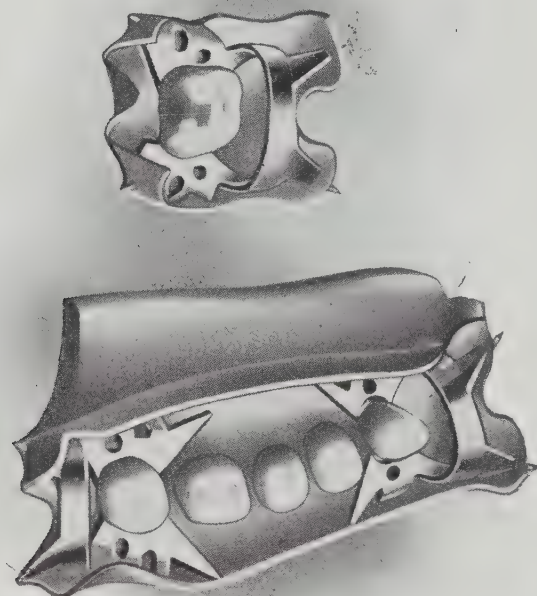
- III. Upon this stud-like wax projection gently place the Metal Stud B and fill up the centre flush by dropping a little melted wax into it as shewn in Fig. 3.
- IV. The Wax Plate is then invested and finished, after which the Rubber Disc is stretched over the stud and the Denture is ready for wear.

N.B.—To obtain the best results, the Rubber Disc should be reversed every morning by the patient.

SOLE AGENTS

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Rubber Dam Clamps



The above illustration shows how to effectively Dam one or more teeth with a minimum amount of rubber. You can apply rubber through this simple method to many operations that in the old way are almost prohibitive.

Made of the finest material, in Three sizes :

No. 24 for Molars.

Nos. 1 and 2 for Bicupsids.

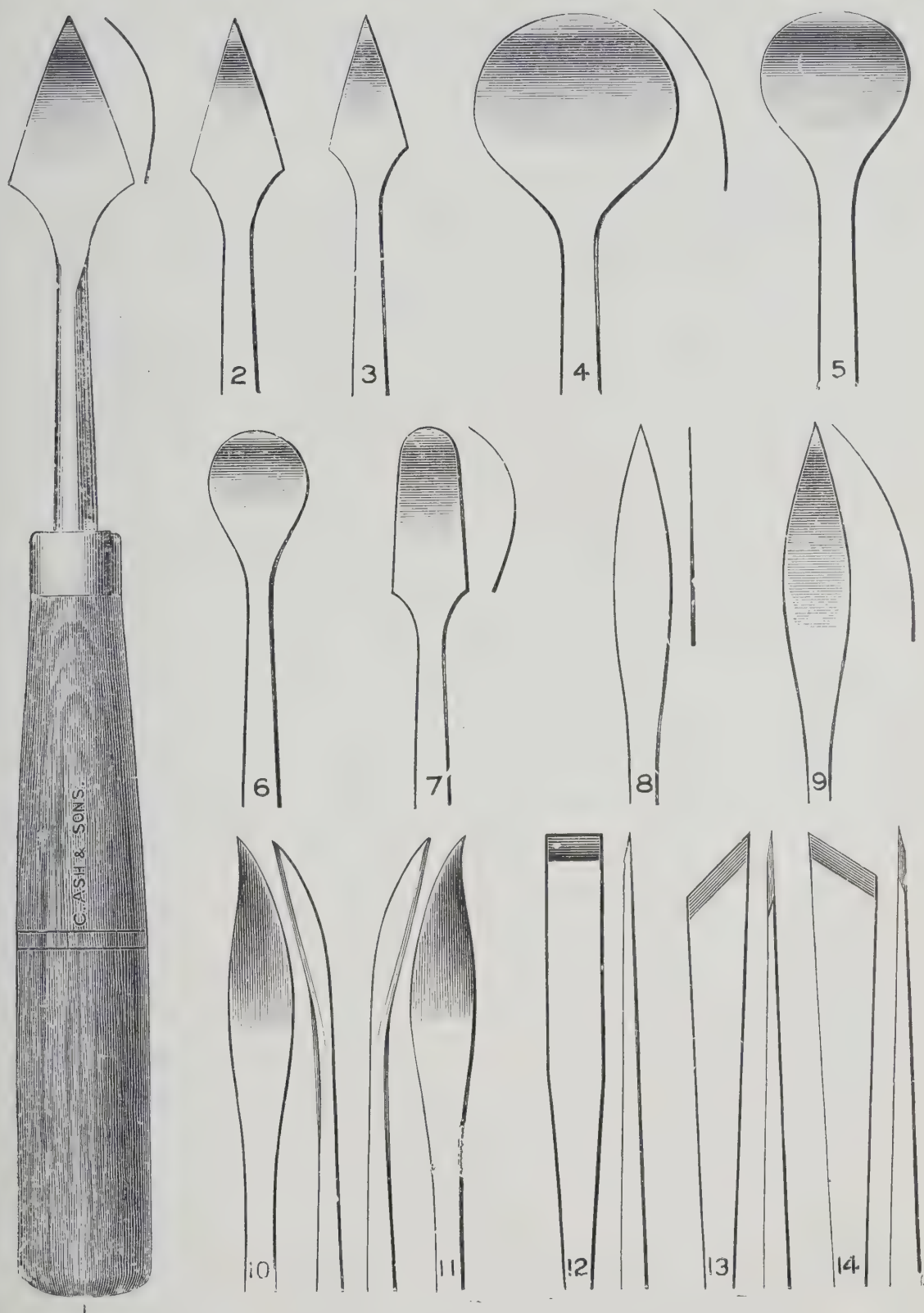
Price each, **65** cents. Per set of three, **\$1.50**.

CLAUDIUS ASH, SONS & CO, Limited

11-13 Grenville Street

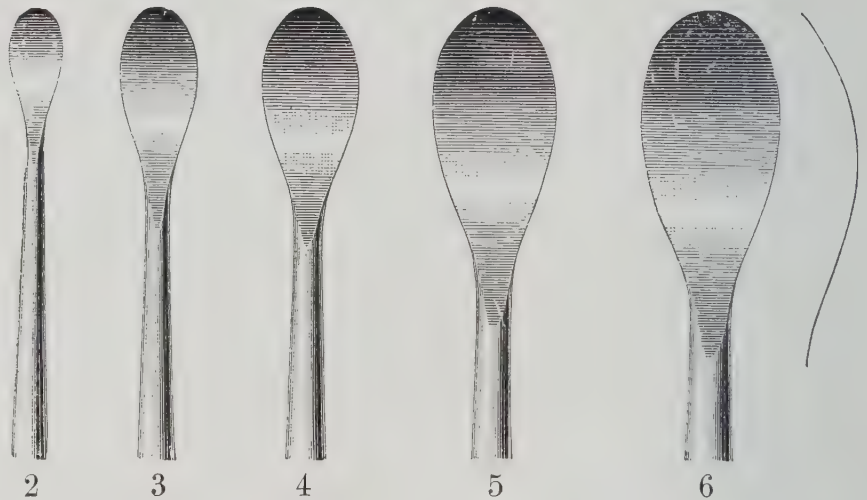
TORONTO, - - CANADA

VULCANITE SCRAPERS



PRICE, any size or shape, in wooden handle like Fig. 1 - 35 Cents

KINGSLEY'S VULCANITE FINISHERS

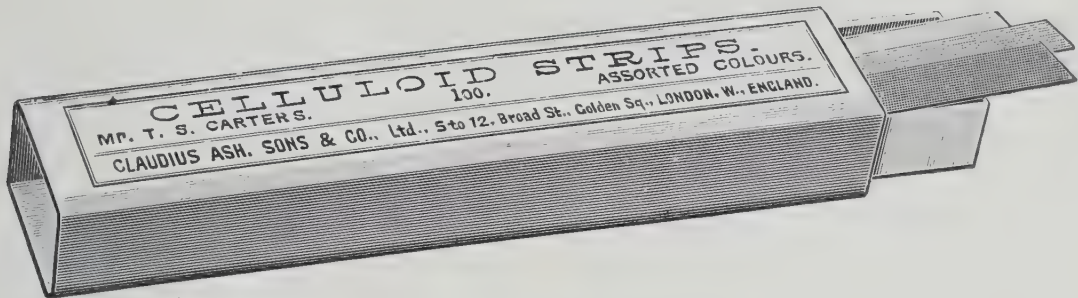


The illustrations show the full size of each blade ; Fig. 1 shows the full length of each with handle ; and the outline on the side of Fig. 6 shows the curve of the blade.

In Polished Steel, with Wooden Handles

(Figs. 1 to 6) each 35 Cents

Carter's Celluloid Strips



These are the first Celluloid Strips that were put on the market for DENTAL USE, and they are still the best although they sell at a lower price than others.

They are invaluable in Silicate Cement Work, and for Matrices.

THIN AND EXTRA THIN

PER BOX - - 35 CENTS

Claudius Ash, Sons & Co., Limited

BORITH

An excellent preparation to recommend your patients for cleansing Dentures. It is a thoroughly reliable preparation.

Price - - \$2.00 Dozen

ZIMO

The best obtundent on the market for the painless extraction of teeth and minor surgery; Antiseptic and Germicidal. Can be used in all cases; safe and effectual. No bad after effects. Once used, always used. "ZIMO is a great practice builder," as everyone says who has used it. 4 oz. bottle, \$1.00; 6 bottles, \$5.00. Every bottle guaranteed. Try a bottle; if not all right send it back and get your money.

Manufactured and put up by

DR. S. T. WHITNEY

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- FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350
- FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -
- FOR SALE—Toronto City Practice. Apply Ash & Sons 400

WANTED—Graduate Assistant. Toronto City. Apply Ash & Sons

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| I New Model Wilkerson Chair, A-1 condition | - - | \$160 |
| I S.S.W. Pattern Chair, Leg Base | - - - - | 30 |
| I Case Harvard Chair | - - - - | 20 |
| I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new | - - - - | 60 |
| I Davis Gasometer, less Face Piece and Tubing, excellent condition | - - - - | 18 |
| I Wetherby Suction Machine (new style), in A-1 condition | | 25 |
| I Davis Gasometer | | |
| I Mills Centrifugal Casting Outfit | - - - - | 25 |
| I Olivian Swager | | |
| I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler | - - - - | 12 |
| I Weber Model A No. 35 Cuspidor. Nearly new | - - | 30 |
| I S.S.W. Leg Base Oil Chair | | |
| I Golden Oak Clark Cabinet | - - - - | 75 |
| I S.S.W. Metal Fountain Cuspidor | | |
| I Leighton-Jackes Switch Board. Onyx Face and Shelf. Nearly new. Perfect condition. 110 Volts. 60 Cycles alternating. Price including Electro Dental H.A. Syringe | | 100 |
| I Golden Oak Clark Cabinet | - - - - | 25 |
| I Ritter Lathe, 110 volts direct. Good condition. | - - | 25 |

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WARNING

IMPOSTERS ARE CHEATING DENTISTS

Many Dentists have been imposed upon recently by a person or persons who offer cheap and inferior broaches in a blue-labeled package bearing the name **C. D. Mfg. Co.** of New York as manufacturers, and who represent them to be the same as Realization Broaches and made by Consolidated Dental Mfg. Co. In several respects this package has been made to imitate our own and with the initials of C. D. Mfg. Co., it has a tendency to deceive and has already deceived dentists into believing that Consolidated Dental Mfg. Co., is the manufacturer

All Realization Broach Packages bear the blue label **B** and monogram as illustrated. Our trade mark  appears on all labels and our name is printed as follows

Consolidated Dental Mfg. Co.



Realization Broaches are made in our own factory and put in only one style package. They cannot be obtained in any other way or from any other source. They are sold by reputable dealers and our retail depots. Any representations to the contrary are false and made with the intention to deceive.

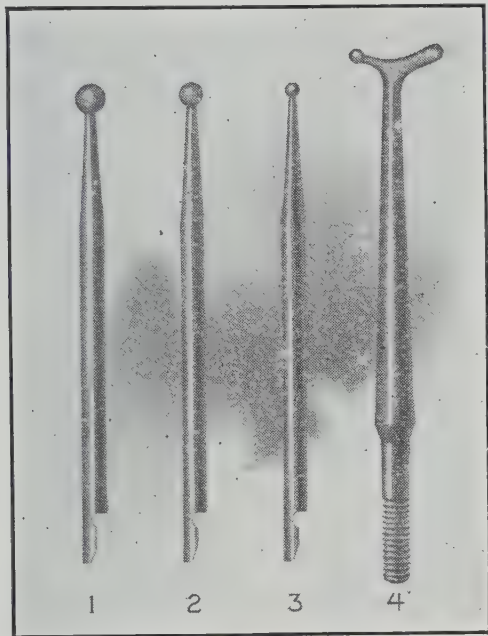
Consolidated  Dental Mfg. Co.



WILLIAMS MAT GOLD

This gold is the highest class product of its kind manufactured. It is the standard by which all mat golds are prepared.

It costs a few cents more per filling than the foil gold, but you have quality, purity, cohesiveness, adaptability and easy manipulation to offset that extra few cents.



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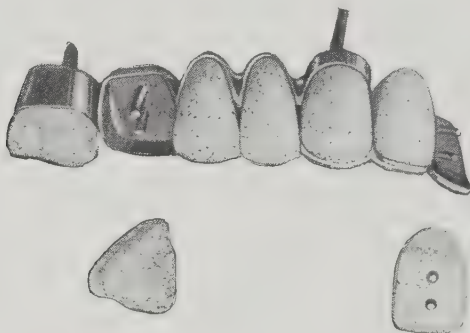
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FROM REPORT ON COMMITTEE ON
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By R. J. Cruise, D.D.S.

CHICAGO; read before Illinois State Dental Society, May, 1913.

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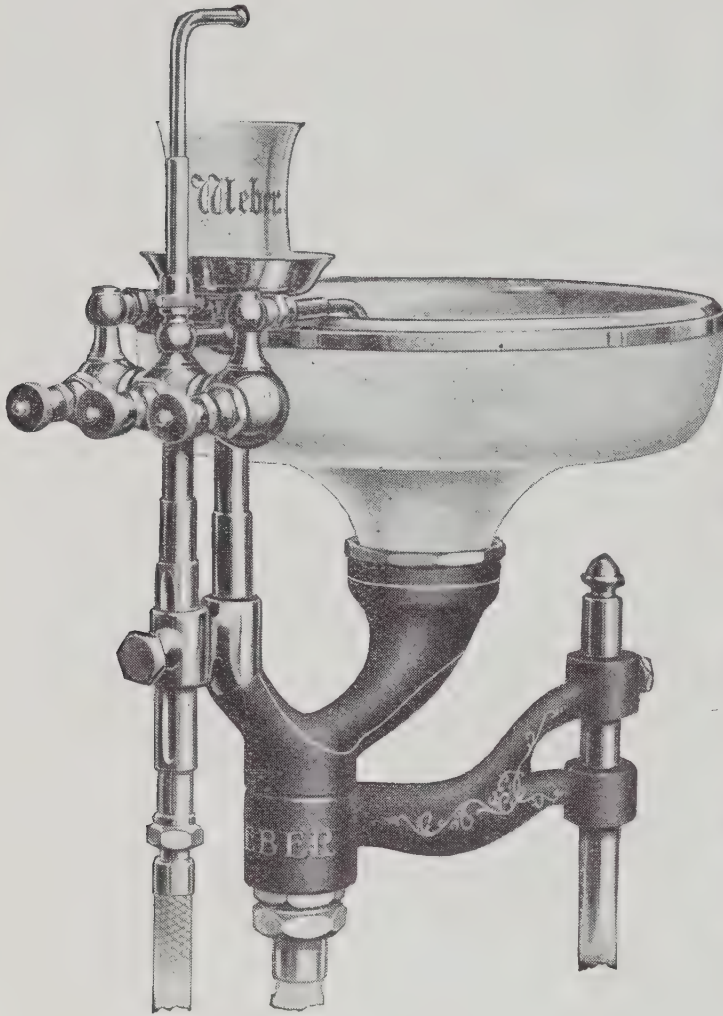
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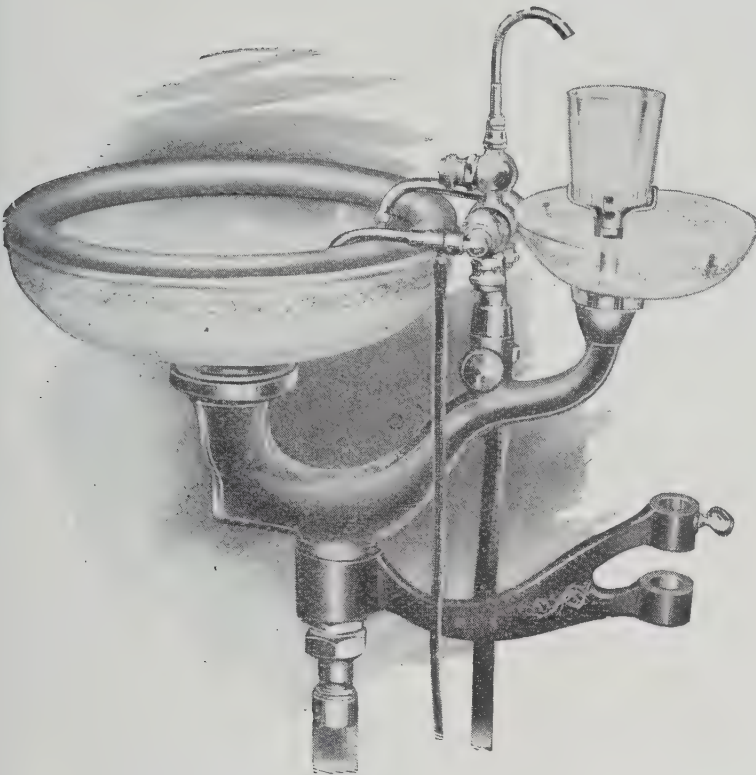
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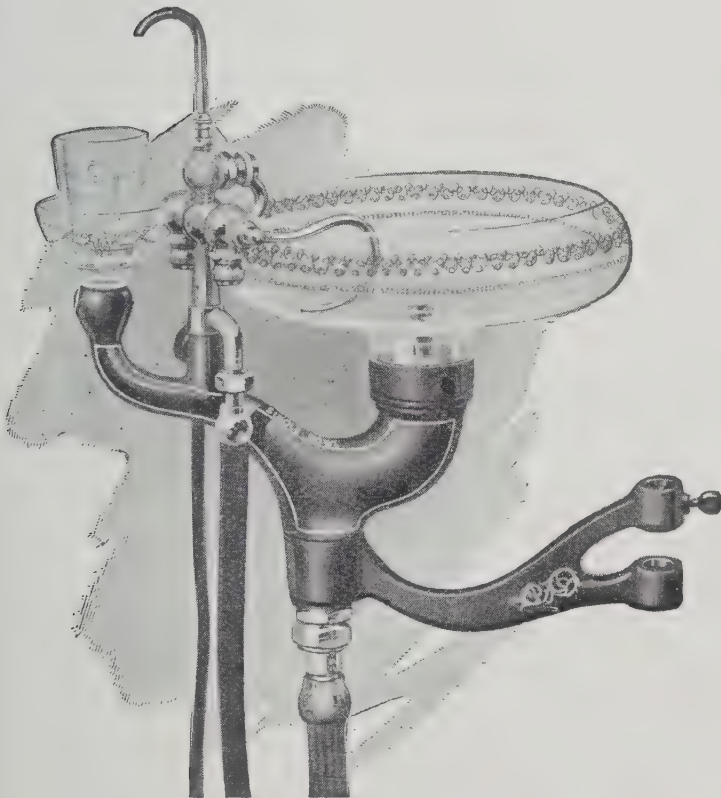
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21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
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16K Dark or Light.....	.85 dwt.	.80 dwt.	.79 dwt.
18K Dark or Light.....	.89 dwt.	.84 dwt.	.83 dwt.
20K Dark or Light.....	.97 dwt.	.92 dwt.	.91 dwt.
21K Dark or Light.....	1.03 dwt.	.98 dwt.	.97 dwt.
Coin	1.04 dwt.	.99 dwt.	.98 dwt.
22K Dark or Light.....	1.05 dwt.	1.00 dwt.	.99 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
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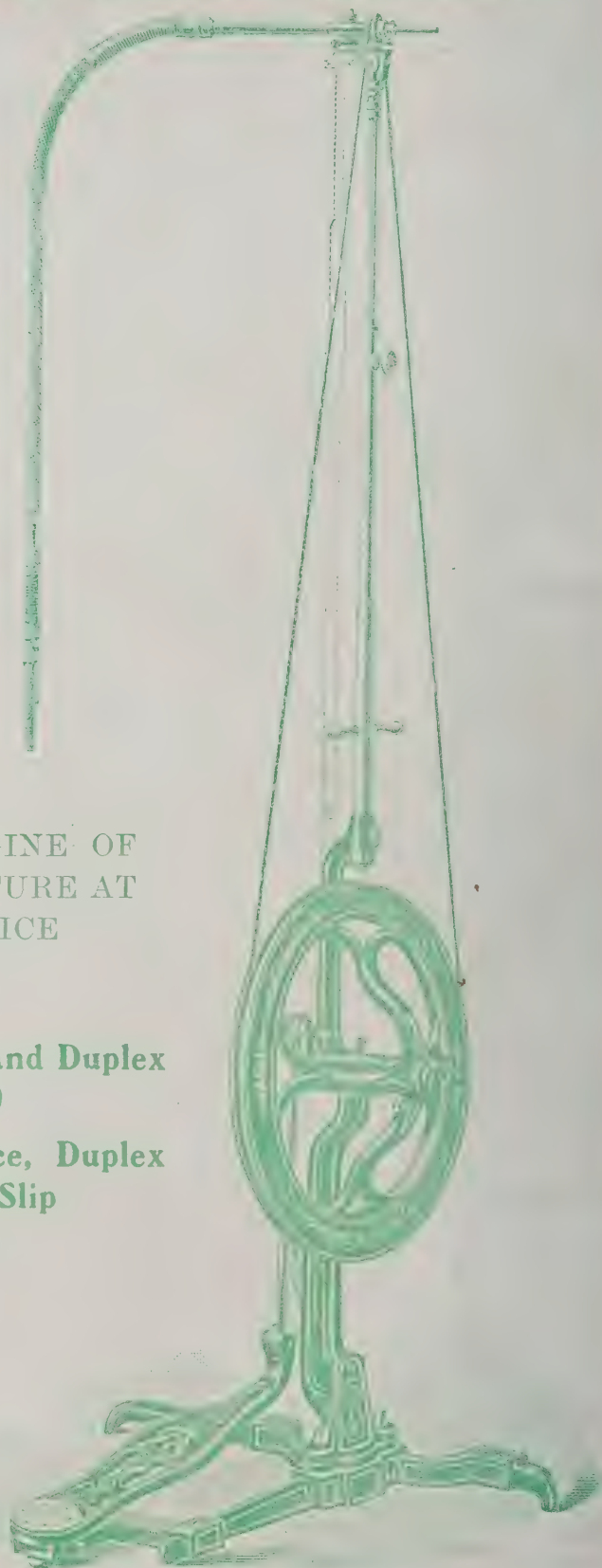


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¶ No man worthy the name
rejoices in any homage which
his own effort and character
have not deserved—————

George William Curtis



Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, NOVEMBER 1, 1913

No. 2

THE IONISATION TREATMENT OF PYORRHOEA.*

By R. FAIRFAX READING, M.R.C.S., L.R.C.P., L.D.S., ENG.

(Read before the N.S.W. Society of Dental Graduates.)

Before entering on the subject-matter of this paper, I wish to state that the idea of using this treatment for pyorrhœa is not original with myself. About two and a half years ago I read some remarks by Mr. E. Sturridge, of London, at a meeting of the Royal Society of Medicine during a discussion upon pyorrhœa. Mr. Sturridge stated that he had been using this treatment for a number of years, and claimed that pyorrhœa was curable by it in a few weeks. The prospect of being able to cure this disease in a few weeks, after failing so regularly by other means for years, pleased me so much that I wrote for particulars. In reply I received full instructions as to current, instruments, drugs, and the method of application, and have since been treating all cases of pyorrhœa on the lines indicated with great satisfaction to myself and patients.

I make this explanation because I have lately received several letters asking for details of the treatment, from England, where, apparently, the work done by Mr. Sturridge in this line has been overlooked.

The cause of pyorrhœa is bacterial infection, and any curative treatment, to be successful, must be capable of destroying the bacteria which have invaded the tissues surrounding the roots of the teeth.

The "vaccine" treatment of pyorrhœa is said by its advocates to be successful and to effect permanent cures; but this method has its disadvantages, the most important of which are: Uncertainty; reaction often severe; duration of treatment long, extending over several months; expense. Stock vaccines are not reliable, especially in cases of mixed infection, therefore it is necessary in most cases to obtain a vaccine from a pure culture

*From *The Commonwealth Dental Review*.

of the infecting bacillus or bacilli. This process entails considerable expense.

The anti-vaccinationists' objection, being based on sentiment, need not be taken seriously.

The "ionisation" treatment has only one possible disadvantage—the absence of an electric current.

The advantages I claim for this method are: Simplicity, effectiveness, duration of treatment short, no reaction or constitutional effects, expense moderate.

"Ionisation" may be briefly described as "the introduction of substances into the tissues by means of an electric current." For instance, a solution of potassium iodide applied to the skin by means of the positive electrode loses its potassium constituent, which travels with the current into the body; but if applied by means of the negative electrode the iodine constituent is liberated and travels into the body against the current towards the positive electrode. The reason of these phenomena is that the potassium ions are only liberated at the positive, and the iodine ions at the negative electrode.

Strychnine sulphate applied to a rabbit's ear by the negative electrode (cathode) produced no result, but when applied by the positive electrode (anode) caused death by strychnine poisoning (Leduc), because the strychnine ions are only liberated at the anode.

The first step in the treatment of pyorrhœa by this or any other method is the complete and careful removal of all deposits from the roots; and in doing this, special attention should be given to the approximal and distal surfaces, for it is here that small deposits are most easily overlooked. In most cases the operation of scaling causes so much bleeding, and the tissues are so swollen as a result of the septic condition present, that it is unwise to attempt to remove all deposit at one operation. The removal of such deposits as are easily reached and the subsequent treatment of the gums with some astringent antiseptic, combine to lessen the irritation and reduce the swelling of the soft tissues to such an extent that the remaining deposits can usually be removed at the next visit. After the second or even the third scaling the gum margins of one or more teeth will sometimes appear bluish and congested; this condition indicates the presence of some small particle of calculus which has been overlooked and must be removed. After the scaling and before applying the astringent, all the pockets should be carefully syringed out with warm water to remove any loose particles of calculus and blood-clot; it is then possible to apply the astringent to the surfaces where it is needed and obtain the best results.

Use any forms of scaler which will effectively remove deposits, discard any which become blunt and cannot be re-sharp-

ened, and when buying new ones pick out only those which your judgment and experience tell you will do the work best. It is a waste of money and drawer space to buy a set of scalers because some well-known man's name is attached to it.

The only special apparatus required is a "current reducer" and a milliampère meter, which will indicate the amount of current being used in fractions of a milliampère; the maximum current required for the treatment of pyorrhœa is one milliampère.

The electrodes, or points for applying the current, should be of platinum, and fitting to a non-conducting holder. If the holder is a conductor and the current is liable to be diverted through the operator's fingers and body and reach the patient through his other hand (which is probably holding the lip or cheek out of the way), and so fail to act at the desired spot.

Platinum is the best material for the electrode, because it is not acted upon by the current or the solutions used, and can be used for any solution.

In medical work, electrodes of copper and zinc are used, because a larger surface is treated and the solution recovers some of its lost copper or zinc from the electrode; but in dental work the point of contact is so small that the renewal can be made more easily by dipping the electrode into the solution from time to time. In medical practice the current is used very much stronger in many cases, and much time would be lost in reducing the current to renew the solution, and again in raising it. Sudden removal or application of a point carrying the large current causes pain, whereas in dental work the current is so weak that the frequent interruptions are not accompanied even by a sense of discomfort.

The shape of the electrode is a matter of choice; a small length of round platinum wire flattened to a spear point at one end is suitable for most cases. The flattening and expansion of the point make it easy to envelop the electrode in cotton-wool, which carries the solution and also permits the point to reach the extremity of a pocket.

The drugs required are few: Chloride of zinc, 5 per cent. solution; argyrol or protargol, 5 per cent. solution; pigment of iodine and pure carbolic acid, equal parts.

The iodine and carbolic acid I use as an application to the gums after scaling. Argyrol and protargol may be used for the same purpose, when the gums are very inflamed and tender; they have a very soothing effect. The chloride of zinc is the agent employed to destroy the causative bacteria of pyorrhœa and effect a cure. In addition to its bactericidal action chloride of zinc has an astringent effect on the gum tissues.

It is here that the ionisation method has the advantage of the vaccine treatment, for the vaccine used must be the right one for the special case, whereas the zinc ions take no notice of classes or kinds, but simply destroy all bacteria and so assist the tissues to recover their normal health.

After being used, all platinum points should be sterilized by being heated to redness in the spirit lamp or Bunsen burner.

All solutions should be made with distilled water, otherwise impurities may be introduced and the solution not be what is required. A fresh quantity of solution should be used for each patient, and the vessel used as a container for this solution should be sterilized before being used again.

The amount of current required is from four-twentieths of a milliampère to one milliampère; the amount I usually employ is six-twentieths of a milliampère. This amount of current is effective and safe. A stronger current is effective, but is liable to cause pain and to burn the tissues.

The time required for treatment after the sealing is completed is in the majority of cases three weeks: First week, three visits; second week, two visits; third week, one visit. The length of the visits will depend upon the number of teeth to be treated; each tooth should be given two minutes in all at each visit.

The method of using the treatment is: Apply the positive electrode, saturated with the chloride of zinc, to the gum margin at one end of the diseased dental arch, then follow the gingival margin round to the end of the arch, and return by way of the other side of the arch to the starting point. During this journey the solution may need to be renewed several times; and in treating the mandibular arch, care should be taken to keep the arch under treatment as free from saliva as possible. Where only a few teeth appear to be affected, the treatment should be applied to all the teeth, because some may be infected but not yet give any indication; the apparently healthy teeth should be treated with a fresh swab of wool on the electrode, not the one which has been used to treat purulent pockets.

The negative electrode is not attached to the patient in any way, but is attached to a small metal cup on the arm of the chair containing a solution of salt in warm water; the patient closes the circuit by placing one or more fingers in this cup, and can at any time break the circuit by removing the fingers from the solution.

After the sealing, and before the treatment is commenced, every tooth which is hopelessly loosened should be extracted. A tooth must have sufficient attachment to the alveolar process to enable it to become firm again, otherwise a cure is impossible by this or any other method of treatment. A loose tooth simply acts as a possible focus of fresh infection, because its constant

movement keeps the gum margins in a state of congestion and consequent lowered resistance to infection.

After-Treatment.—This consists in the daily use of a stiff tooth-brush in combination with a mild antiseptic, such as glycothymolin or listerine. The patient should be seen every six months, with a view to checking any possible re-infection. The best form of tooth-brush for these cases is one in which not more than three-quarters of an inch of the shaft is occupied by the bristles; this form of brush will reach points between the teeth which are inaccessible to the ordinary brush.

In conclusion, this treatment may be summarised as follows: Thorough removal of calculus, followed by extraction of incurable teeth; application of carbolic acid and pigment of iodine (equal parts) to the gum margins and pockets; three weeks' treatment with $\frac{1}{2}$ to 1 milliampère current plus chloride of zinc 5 per cent. The treatment should be supplemented by the removal of any small deposits of calculus which may from time to time appear as the gum margins shrink. Finally, careful oral hygiene on the patient's part, with an inspection by the dentist every six months.

No known treatment will restore lost tissues such as pericementum and alveolar process, but this one will arrest the disease and restore the remaining tissues to a state of health.

PRACTICAL POINTS.

Silicate Translucent Cement.—Why does a silicate translucent cement wear away in some mouths more quickly than in others, and what is there in the saliva which wears it away?

Given that no free acid is left in the mixing of the cement, wearing away is due to the acids in the saliva, such as formic acid, butyric acid, and lactic acid. The most destructive of these is lactic acid; the others are only found in the mouth in small traces, and may be dismissed as of no consequence.—Claudius Ash, Sons & Co., Ltd.

Soldering Backings on Platinum Pin Teeth.—Much trouble and annoyance are frequently caused through carelessness in backing teeth with gold or other metal.

After the case has been waxed-up, invested and scalded-out, it should be placed on an asbestos or fireclay slab and slowly heated up until all the moisture has been driven off. The blow-pipe flame should then first be applied to the case, and finally to the solder.

If the case be allowed to remain on the Bunsen burner beyond the drying-off stage, excessive oxidation takes place. This oxidation is liable to be absorbed by the platinum pins, to render them brittle, and thus to make them very liable to fracture.—Claudius Ash, Sons & Co., Ltd.

Water for Arkansas Stone.—Water used on the Arkansas stone when sharpening instruments is just as efficient as oil and more cleanly.—Dental Brief.

An Improved Method of Fitting Detached-Post Crowns to a Root.—The tooth to be crowned is ground down to within one-sixtieth of an inch of the gum, a wire measurement of the root is taken, and a funnel-shaped tube of thirty-gauge silver or gold plate about one-half inch high is made, the narrower end measuring the same as the wire measurement of the root. This tube is trimmed to fit the gum, allowing it to extend under the same. The canal is then prepared for the reception of the post, the tube is placed on the root, and firmly held there, while with a suitable root-facer the root is shaped up under the gum. After the root is shaped below the gum line, the tube is removed, and the tooth is ground to fit the tube with a fine-grit carborundum stone, thus ensuring a perfect fit between the band and tooth. The crown is then flattened on a lathe stone and mounted in the usual way. By this method the gums are cut very little, and a most accurate fit is secured.—G. G. Bell, Dental Digest.

Aid in Taking an Impression for a Bridge.—Cases often present in which difficulty is encountered in taking an impression for a bridge. If milk of magnesia is pain'ed over the parts to be reproduced, the impression may be taken out without any discomfort to the patient or trouble to the operator.—L. Kohn, Odontologist.

Cleaning Broaches.—The broach to be cleaned is laid on the washstand, and brushed with a stiff brush, as, for instance, a small nail-brush, in the direction away from the barbs. Clean broaches should be kept in 95 per cent. alcohol. The cleaning should be done before the pulp débris or cotton threads have dried on the broach.—K. P. Heintz, Dental Digest.

DIATORIC TEETH IN CROWN AND BRIDGE WORK.

By W. A. Burns, St. Thomas, Ont.

Time proves all things. The late Dr. J. Foster Flagg, the foremost pioneer in research work in dentistry, never advocated any innovation in practice unless he had first proved its practicability by at least ten years of experimental work. Yet even at that he was oft misunderstood through omitting some minor detail in the description of a process; for instance, in his advocating the use of cotton as a root canal filler, he failed to emphasize the fact that it was raw cotton which was to be used, and which will not absorb moisture, and not a prepared absorbent cotton. The use of raw cotton with proper medicaments is successful as a root canal filler. The failure to grasp detail in operative procedure has been responsible for many failures in dentistry.

Some ten years ago at a meeting of the Ontario Dental Society held in Toronto, I demonstrated the use of the Ash's diatoric teeth in relation to crown and bridge work. From further experience I see no point wherein to modify or correct any principle of technic advanced at that time, except in as much as to have modified the same in conformity with the accepted principles in cast work.

At the outset I state emphatically that the checking in soldering or casting against porcelain is not caused by borax or any other flux, but is caused wholly and solely by an unequal distribution of heat units. It is the recognition of this principle that has enabled me for the past fifteen years to use diatoric teeth in bridge work and at present and for the past three years I have successfully been casting metals of all descriptions against porcelain and with invariable success, always taking in recognition the melting point of the metal I am using and seeing that the investment is heated to approximately the same point. To a certain extent the Ash diatoric tooth has been discarded in favor of the Ash dowel and tube crowns, and in the case of all repairs through the use of these teeth the repair is still made by the system I enunciated in my article printed in 1903 in the Dominion Dental Journal, viz.:

"In writing this article I must first acknowledge my indebtedness to Mr. Sykes, the American representative of the Claudius Ash Company, who, at the meeting of the Western Ontario Dental Association, in St. Thomas, last June, drew my attention to the Ash swager, and to its utility in utilizing Ash diatoric bicuspid and molars as dummies in bridge work. For some years previous I had been experimenting with different swagers, etc., attempting to use these and other diatoric teeth, and had been modifying the teeth to suit the swager used. Since meeting Mr. Sykes the problem has been solved. Bran, bird-shot, modelling

compound and various other substances had been utilized as a swager, but unsuccessfully. The principle of the rubber swager solved the problem.

The applicability of the modification of accepted principles of modern crown and bridge work as hereinafter set forth are limited only by the unfitness of the Ash and other diatoric teeth, which, of course, were intended primarily for rubber denture work.

Construction of Bicuspid and Molar Dummies.

Backings.—In this and all other modifications hereinafter described, backings must be of pure gold, of from 34 to 36 gauge. Take suitable molar bicuspid tooth; work gold backing with fingers over the same, so that in swaging it will not buckle. Imbed crown of tooth in dental lac or sealing-wax in the lower die of swager, adjust the swager and strike up with plunger. On removal from the swager the backing will be found perfectly adapted to the tooth, and the gold broken at the transverse and perpendicular openings. Trim off the superfluous gold from the margins. Make a not too compact rope of gold foil and pass through transverse openings; pack foil loosely in perpendicular opening; paint tooth backing and foil liberally with borax. Place solder necessary to make compact mass of backing and foil over perpendicular opening in tooth; solder all together in open flame, without investment either, in Bunsen or on ordinary asbestos pad, in preference the latter. In assembling the teeth for a bridge each and every dummy must be constructed separately and completely, otherwise the porcelain will check by the natural contraction of the solder, which difficulty is overcome if the dummies are made complete separately, and afterwards assembled and soldered by the ordinary method.

Repair.—If an Ash diatoric dummy be broken, it is very easy of repair in the mouth without removal of the bridge.

Diagram No. 1 is a section of a diatoric as it appears in an ordinary bridge.

If necessary to replace one of these teeth, take a diamond disk, or thin carborundum stone; grind off the shoulder "A" and cut out the slot "B," as shown in the dotted line, Fig. 2. The tooth is then ready to be cemented to the bridge, and leaves the bridge practically as strong as before.

Richmond Crowns.—The attachment to the root is constructed either with or without the band by the accepted methods of practice. Take an Ash old style diatoric tooth suitable to the case, grind and fit. Then swage backing of pure gold thereto, as hereinbefore described; trim, invest tooth and attachment; fill in all interstices loosely with gold foil and solder in the usual way.

The advantages of this crown are obvious, viz., its translucency at the incisive edge, and its easiness of repair; but, owing to the thickness of the ordinary diatoric tooth its applicability is not of a very extensive range. Its repair in the mouth is so simple as almost to preclude description. All that is necessary is to grind out the transverse attachment in the backing, trim off the larger end of the dovetail in the tooth, and the attachment is as easy and as strong as a Mason detachable.

The paucity of forms only limits the use of these teeth, whose attachment depends not only on the ordinary dovetail, but also on the countersunk shoulder which is transversely of the tooth.

We all recognize certain conditions in crown work wherein the all-gold crown is not advisable. The following procedure to a certain extent obviates that difficulty.

The figure No. 3 is an ordinary Ash diatoric bicuspid.

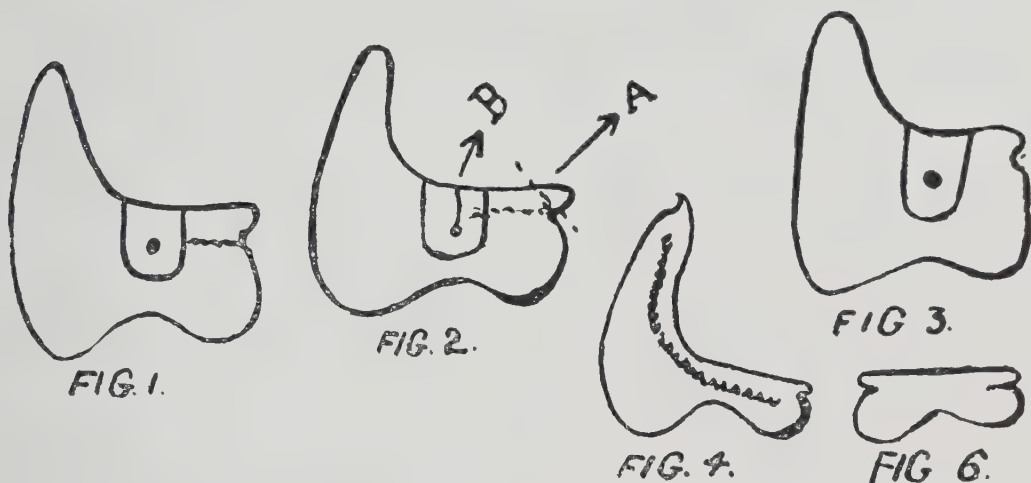


Figure No. 4 is the same bicuspid, but ground with a groove countersunk along the dotted line. To utilize this prepared facing in bicuspid caps, with porcelain face and top, grind and trim tooth and root and adjust band; select suitable tooth, grind as in foregoing figure to fit root, occlusion and band; swage backing over facing as described in former methods; trim band and adjust facing thereto; burnish band to approximate backing, and solder all together from the inside either in the open flame of the Bunsen burner, or on asbestos pad with blowpipe. When completed this makes a very artistic and complete crown.

Another condition we all frequently meet with is where a gold crown occludes with an artificial plate. Unless the cusps of the crown are abnormally heavy, it is but a very short time before they are worn through. This difficulty is overcome easily as follows: Construct the band in the ordinary method, grinding, as is usual in these cases, to give plenty of thickness in the occlusion. Adjust the band, take porcelain tooth suitable, and grind

so that it approximates band and occlusion. When completed, it will appear as in Fig. 6.

The dotted lines represent a countersunk groove around the porcelain tooth. Swage backing over porcelain, adjust to band and solder from inside, as foregoing description.

Of the latter two styles of crown I have had some six years' experience, entirely satisfactory. The use of molar and bicuspid dummies has been also entirely satisfactory. The use of the Richmond modification has been limited too much by the lack of variety in the shapes of teeth to give a decided opinion as to its success.

I have also experimented with many modifications of the methods hereinbefore described, but the description thereof would perhaps be too lengthy for publication. Perhaps at some future time I may give a synopsis of my successes and failures in this line of work.

It is unnecessary in this article to go into an extensive description of the principles involved in casting, except to give a few of the vital points which are essential to keep in view in casting metal against porcelain. In the first place it must be remembered that where there is wax there will also be found the metal in the completed cast, in the second place heat the investment to eliminate the wax as soon as possible after setting and before investment is dry. It is essential to heat the investment slowly and as near as possible bringing it to approximately the melting point of the metal being used in casting, and in cooling to see that it is done slowly and evenly. In event of a fracture of a diatoric tooth or of a dowel crown, its repair is so simple as to almost preclude description; the article published in 1903 gives full detail. With slight variation in form the Ash anterior diatoric tooth, in conjunction with their dowel crowns, would fill, I still believe, a long-felt want in dentistry owing to their ease of repair in fracture and their adaptability as a universal detachable crown or tooth. It is my experience that the Ash porcelain is less liable to fracture in casting or soldering than any other tooth on the market. In conclusion, never overheat the investment or teeth if done especially with aluminum, as it will cause discoloration of teeth.

Ash's Repair Facings

Made in the patterns shown in booklet which can be had on application, and supplied in sets of 6, sets of 4, pairs and odd.

The three sizes here illustrated are intended to show the distinctive feature to which we wish to draw attention, viz., the oval cavity in the back of each.

They can be used for repairing nearly every kind of denture; they are easily applied, exceedingly durable, and can be quickly fitted—it does not take longer than from 10 to 15 minutes to fit one.



83



71



14

They are invaluable for repairs to Bridges, and in all cases of Plate and Crown work in which a flat tooth has been replaced.

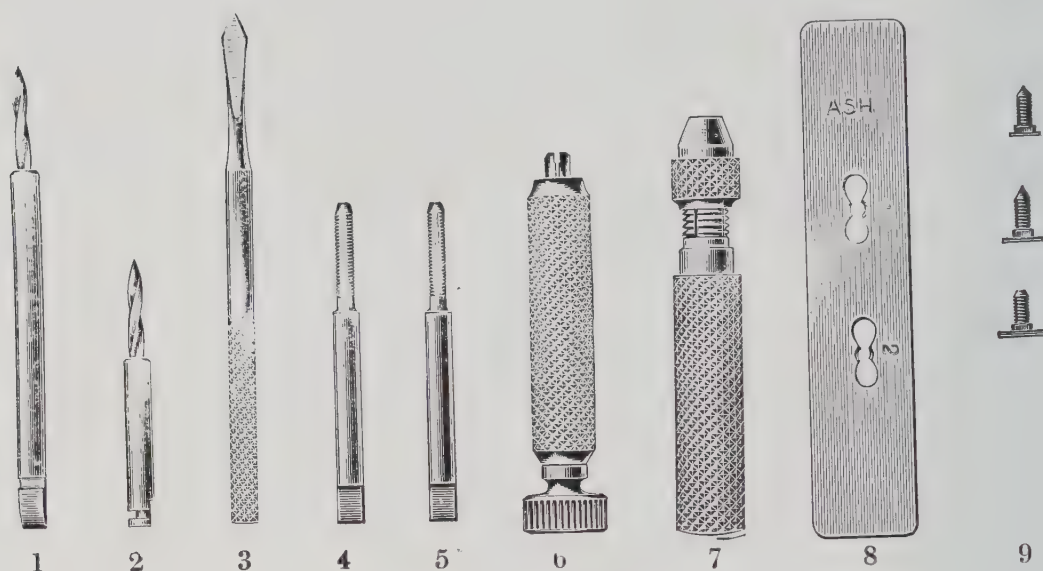
The oval cavity at the back of each Facing corresponds with the positions of pins in our Flat Pin Teeth. The Facings do not require backing, but can be applied to the backings of fractured or broken teeth when the broken portions of mineral have been removed from the backings.

IMPORTANT NOTE.

For attaching these Repair Facings to teeth backings, etc., we recommend our **C.A.S. Cement**, or our **Inlay and Crown Cement**.

Ash's Repair Facing Outfit

Suggested by MR. H. J. CORIN, L.D.S. Eng.



Figs. 1 and 2, Twist Drills for Straight and Right Angle for drilling hole in backing.

Fig. 3, Countersinking Tool for removing burred edge and countersinking the hole.

Figs. 4 and 5, Screw Taps, large and small.

Fig. 6, Holder for carrying Gold Stud and screwing it into position.

Fig. 7, Holder for carrying small and large Screw Taps, Figs. 4 and 5.

Fig. 8, Screw Plate for the Dentist's use in making his own Gold Studs, should he desire to do so.

Fig. 9, Small, medium, and large Gold Studs.

DIRECTIONS FOR USE:

In the event of a tooth breaking off a bridge or a plate and bringing away with it one of the pins, leaving the other standing in the backing, cut off the standing pin, grind the backing flat with a small carborundum point, drill a hole in the centre of the backing, remove the burred edge formed by the drill, with the countersinking tool, tap the hole with the small tap (Fig. 5), follow on with the large tap (Fig. 4); again clear away the burred edge with the countersinking tool, fix the stud selected in holder (Fig. 6), and screw it into position right up to the shoulder. The case is now ready for the Repair Facing to be cemented on the stud.

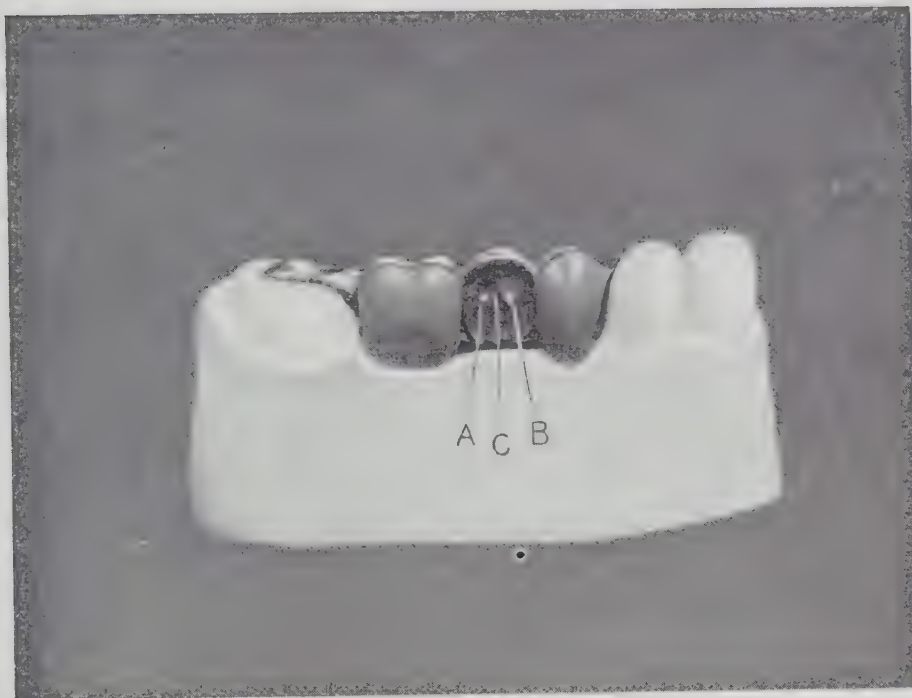
To cement a Repair Facing on the Stud.—Select a Repair Facing of the same size as the broken-off tooth, remove all traces of wax from it, thoroughly cleanse it and the backing with chloroform or pure alcohol; mix C.A.S. Cement or Ash's Inlay and Crown Cement to a thin creamy consistency, smear the backing and the back of the Facing with it, also fill up the undercuts in the oval cavity of the Facing, press the Facing to place, hold it firmly in position for four or five minutes, then trim away excess of cement and coat the exposed edge with Ash's Varnish.

NOTES.

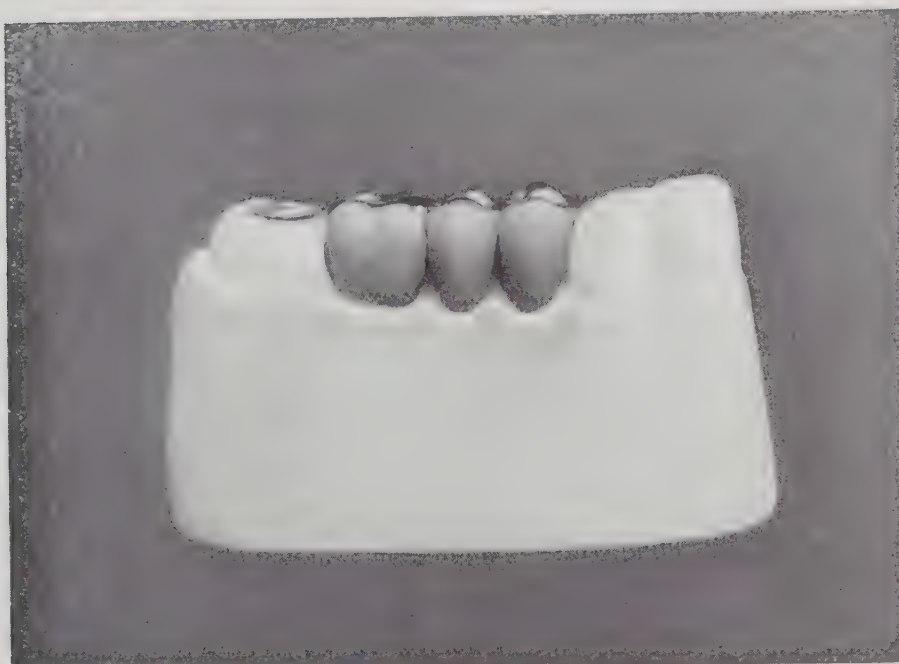
1. The method described above is applicable when both pins come away with the tooth.

2. Should both pins be left standing, in the space left by a broken-off tooth, a Repair Facing can be cemented on them.

Ash's Repair Facing Outfit—*Continued*



A—Broken Pin. B—Pin left standing.
C—Spot where new hole should be drilled and tapped.



Repair Facing cemented on to Stud.

Ash's Repair Facing Outfit—*Continued*



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Repair Facing Outfit as per Illustration	-	\$5.00
Repair Facings, each	- - - - -	.18
Extra Gold Studs	- - - - -	.40

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has now been before the Profession for

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for taking impressions of the mouth and
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even the colour of the box in which it is packed, and the colour
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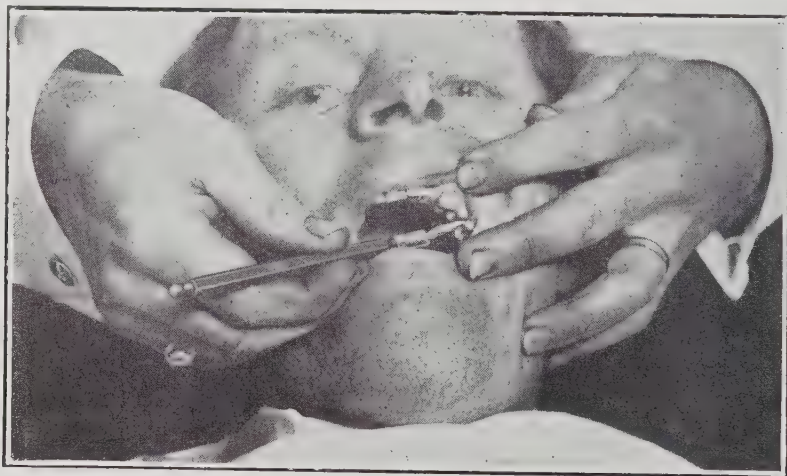
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The holder is a positive locking device allowing the different instruments to be held at various angles and twists. The principle involved is a great advance over the old ball and socket fixture and ensures rigidity of the point.



The attachment for holding broaches and cleansers is the most positive of all holders, and allows of any length broach being used. Cut off the broach to the required length, being sure that enough of the shaft remains after it has been inserted in the attachment to engage with inside bottom of the screw socket. To remove, simply force the broach backwards through the attachment.

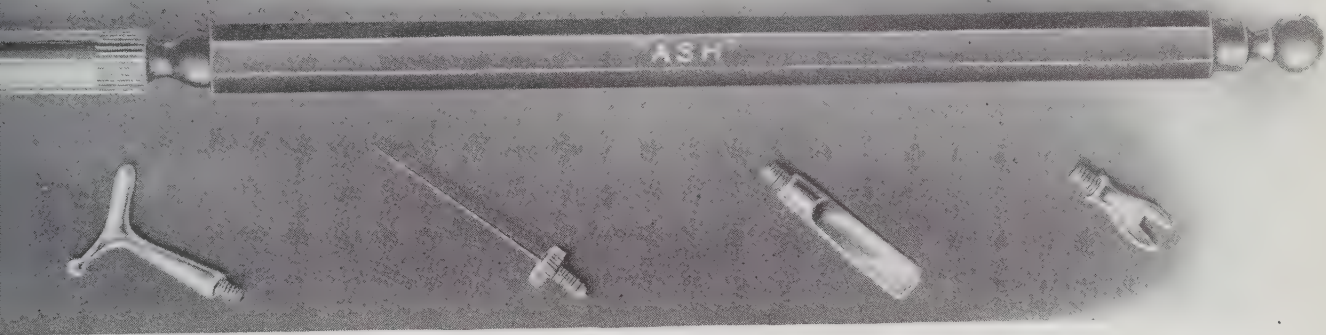
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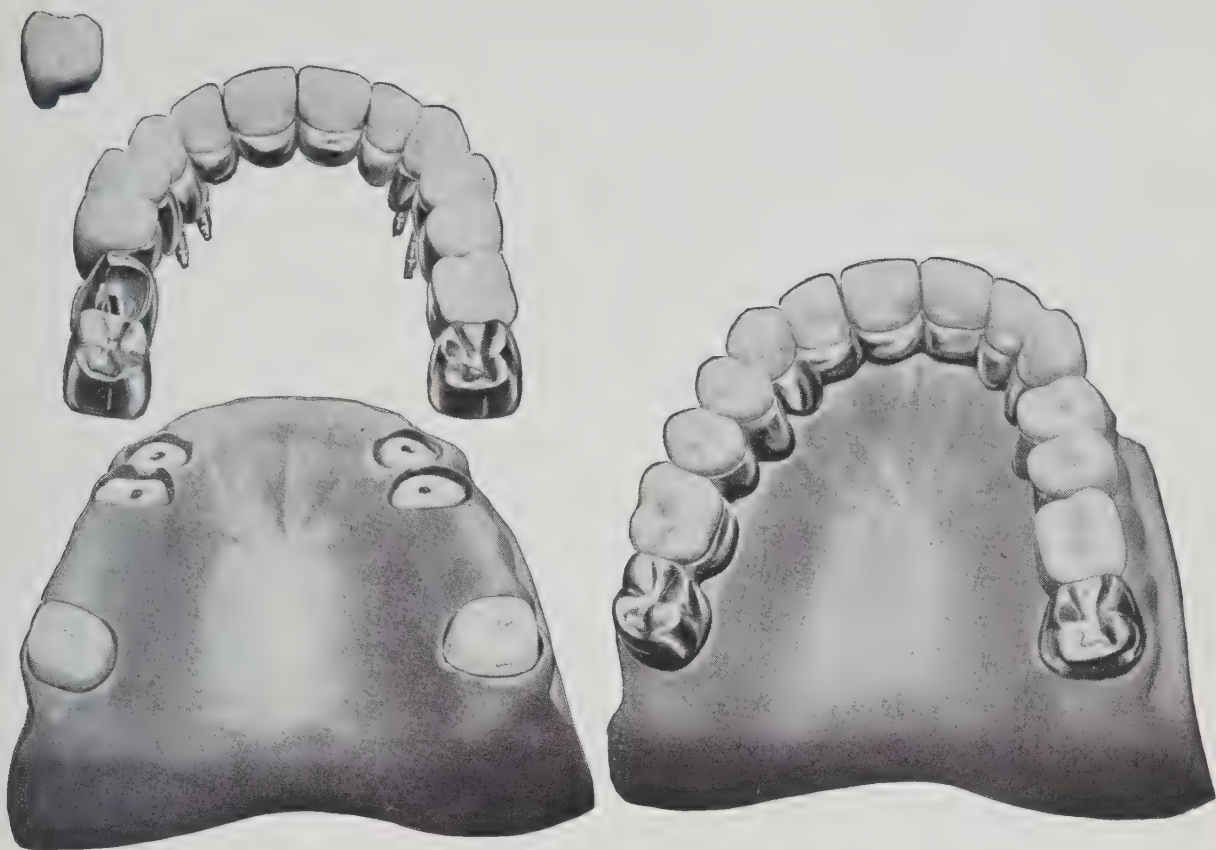
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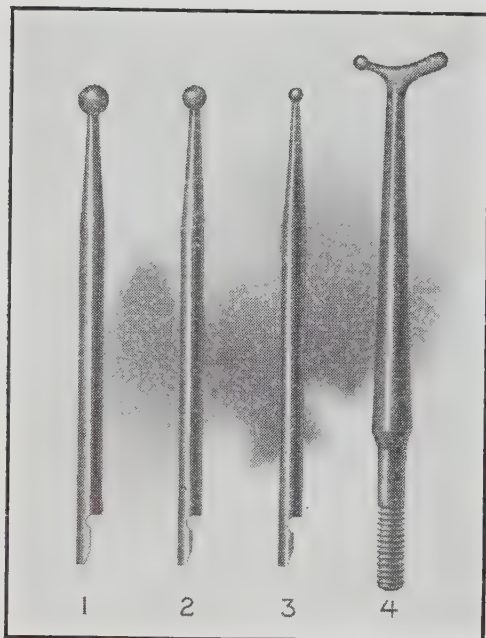
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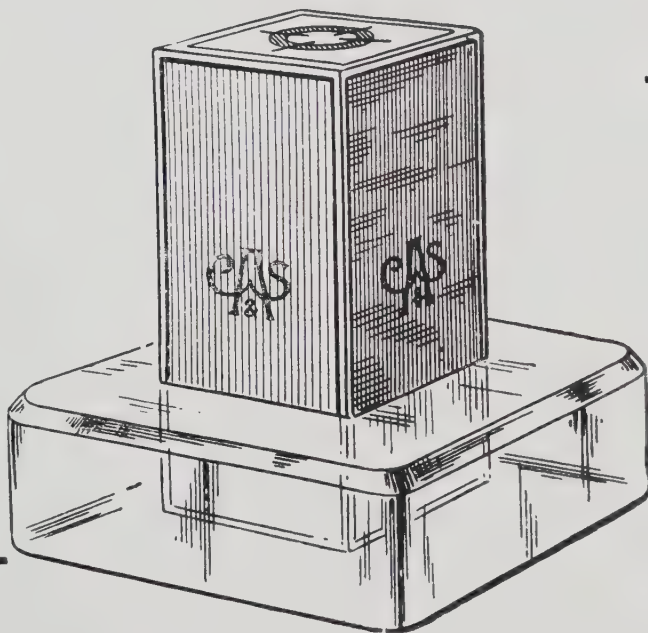
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The experience of thousands of Dentists the world over proves that the full-sized, strong, tough Kazan pin offers the maximum of service that can be obtained in an artificial tooth. The men who use Kazan are coining the big profits of Satisfaction from the mint of Experience.

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Ans.—Yes; a dollar is enough for the AVERAGE amalgam filling.

Ques.—Are some amalgam fillings worth more and some worth less?

Ans.—Yes; some are worth many dollars and some are not worth ten cents.

Ques.—Does that depend upon the skill and pains of the operator?

Ans.—Not altogether; it frequently depends upon the kind of alloy he uses.

Ques.—Can't a good workman get good results if he uses poor tools?

Ans.—Possibly; but he can't get good results from poor materials.

Ques.—What is the best alloy manufactured?

Ans.—**Twentieth Century Alloy.**

Ques.—Is that merely the claim of an advertiser?

Ans.—No; it was the first alloy of really high grade, of the balanced type, that was generally introduced to the profession, and is to-day used by most of the best alloy users.

Ques.—How may I know this to be true?

Ans.—**Because we say so**, and because Twentieth Century Alloy has never been tested in the mouth or out of the mouth, but that it has verified every claim we make for it.

Ques.—Where can I get it?

Ans.—From any dealer.

Ques.—What is the price?

Ans.—\$2.50 per ounce.

Ques.—Who is the maker?

Ans.—The L. D. Caulk Company.

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The completed operation is no better than the materials you have used, no matter what skill and pains you have employed.

It is a serious matter for a dentist to stake his professional reputation on operations performed with cheap or unknown materials.

If the work is to endure, it must be right, and the materials must be right.

This truth has no greater force in any connection than in setting gold appliances, such as facings, crowns, bridges and inlays.

No matter what pains you may take, if the appliance comes off, the operation is a failure.

That which determines its endurance is the cement you have used. If that link is weak, your purpose is defeated.

Your cement must have tenacity—not merely superficial stickiness—but a tenacity which shows greatest after the cement has permanently set, a tenacity that embraces strength and insolubility.

Caulk's Crown and Bridge and Gold Inlay Cement is the strongest and most tenacious cement manufactured for the special purposes its name indicates.

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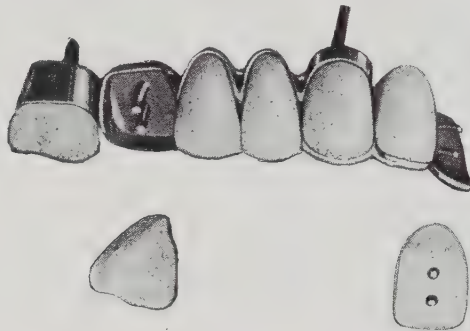
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Oct. 4, 1913.

The Dentinol & Pyorrhicide Co., City.

Gentlemen:—Almost one year ago I was sent to your Clinic by a dentist to be treated for pyorrhœa.

Most of my teeth were ground down to the gums, which were irritated and inflamed, and my teeth were also loose and so sensitive that I could not masticate my food, while even the slight acidity of fresh fruit made the pleasure of eating it an absolute impossibility. Besides, the mal-occlusion was so pronounced that the pyorrhœa was growing worse day by day, and my health was suffering in consequence. My own dentist, who had been treating me for months, informed me that nothing more could be done, and that the only course was to have the teeth extracted, and resort to the artificial. Another dentist whom I subsequently met referred me to you. The head of your Clinical Department, Dr. Spies, thoroughly examined my mouth, and while stating that mine was one of the most serious and complicated cases of pyorrhœa he had ever known, agreed to treat me.

Two months afterward my mouth was in a perfectly healthy condition, my gums were normal, and my teeth tight. I can now masticate thoroughly, and acids do not affect me. Not one tooth was extracted and I attribute this marvelous result to the assistance of inlays and splints to make the bite even, relieving undue pressure from the diseased parts, and more particularly the application of Dentinol in conjunction with instrumental treatment given me by Dr. Spies.

If this expression of my appreciation comes to you rather late it is even more hearty because during the interim the results of your work have had the severest test and the excellent condition of my mouth ten months ago remains unchanged. Incidentally I have gained 14 pounds in weight.

You are at liberty to refer any skeptic, either professional or otherwise, to me as a practical demonstration, as I believe that the most despicable creature on earth is the ungrateful man.

Very truly yours,

(GWM:AW)

(Signed) GEORGE W. MARKENS.

The welfare of patients, the elevation of the profession, and your personal reputation, demands attention not only to pyorrhœa treatment, but, better still, to pyorrhœa prevention.

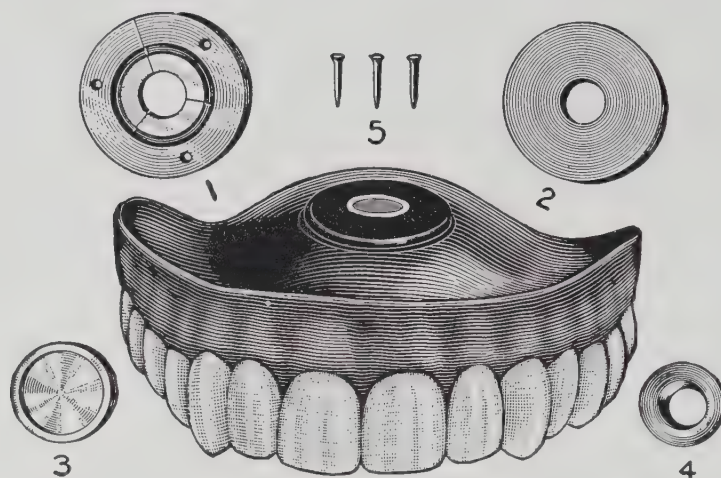
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No extra time required in making plate.
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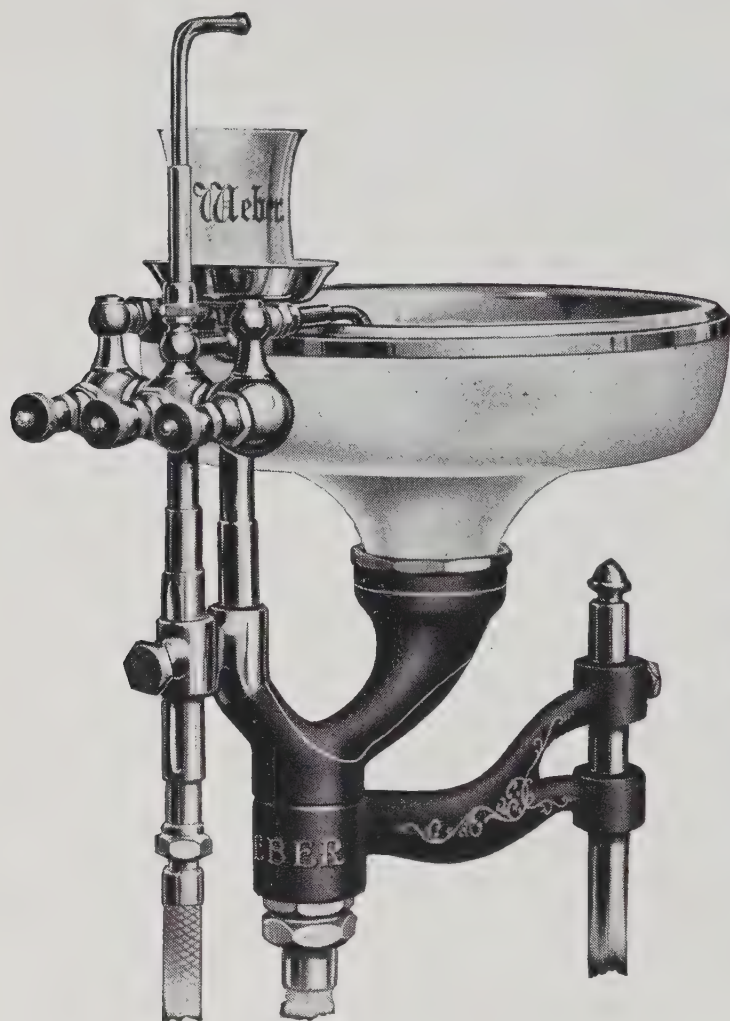
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Absolutely no contraction
One 20000 of an inch expansion
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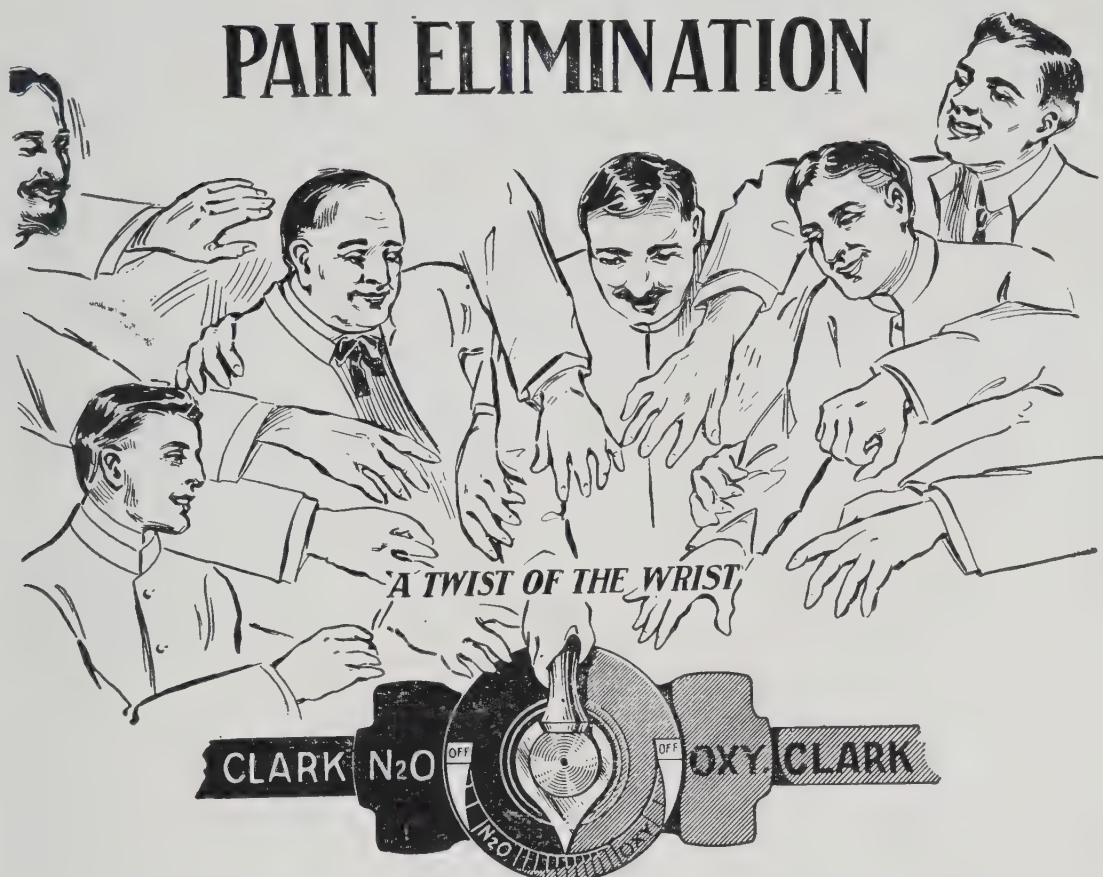
WE have no smooth talk to present, just an offer to place a WEBER Fountain Cuspidor in your office for a test, subject to your own conditions, and leave the verdict to you. This offer is based on results, not theory, as the Spittoon will go in on a basis of make good or get out.

Order one through your Dealer NOW

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The World's Largest Mfrs. of Fountain Spittoons.

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20K Dark or Light.....	\$0.98 dwt.	\$0.93 dwt.	\$0.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.

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21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.
Far Superior Non-Shrinkable.....	1.35 dwt.	1.30 dwt.	1.25 dwt.

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12K Dark or Light.....	.66 dwt.	.61 dwt.	.59 dwt.
14K Dark or Light.....	.75 dwt.	.70 dwt.	.69 dwt.
16K Dark or Light.....	.85 dwt.	.80 dwt.	.79 dwt.
18K Dark or Light.....	.89 dwt.	.84 dwt.	.83 dwt.
20K Dark or Light.....	.97 dwt.	.92 dwt.	.91 dwt.
21K Dark or Light.....	1.03 dwt.	.98 dwt.	.97 dwt.
Coin	1.04 dwt.	.99 dwt.	.98 dwt.
22K Dark or Light.....	1.05 dwt.	1.00 dwt.	.99 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.14 dwt.	1.09 dwt.	1.08 dwt.
Clasp Plate	1.30 dwt.	1.25 dwt.	1.20 dwt.
Green Gold for backing.....	1.03 dwt.	.98 dwt.	.95 dwt.
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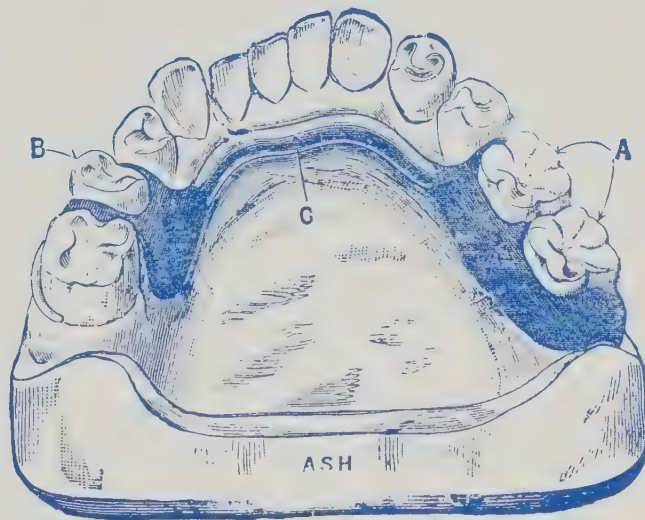
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DECEMBER, 1913

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Canadian Winter

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Every great and commanding
movement in the annals of the
world is the triumph of enthus-
iasm.—*Emerson*



Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, DECEMBER 1, 1913

No. 3

ITEMS OF INTEREST.

On the Warming of Anæsthetics.—One day when giving gas with my curved tube for prolonging anæsthesia, I found the patient's mouth unusually cold. This undoubtedly arose from the stream of nitrous oxide gas that was being sent into it. On the patient leaving the chair, I made a test of placing a bulb of the thermometer in the gas bag. The result was that in a room registering 64° Fahrenheit (18° C.), the thermometer in the bag was a shade under 50° Fahrenheit (10° C.). Since that time I have made a practice of letting the gas traverse a small copper coil as it passes to the bag and of placing the coil in hot water. This method heats the gas and prevents it causing possible trouble to the lungs of a delicate patient.—S. A. Coxon in the Transactions of the Society of Anæsthetists, Vol. I., 1898.

Cold Nitrous Oxide Gas.—Regarding cold gas, the objection I have to it, and therefore the reason I introduced the apparatus for warming it, was that the mouth got cold during the administration, and it was not desirable for cold gas to be pumped into the lungs.—S. A. Coxon.

Prevention of Dental Caries.—If, during the past hundred years, half as much time, money and brain power had been spent in evolving means for the prevention of dental caries as has been spent in the perfecting of ways and means for replacing artificially, tissues lost by disease, there can be no doubt that the present condition of affairs would not have come about; in fact, it is probably not too much to say that the majority of the members of the dental profession have been content, not to treat the disease at all from a seriously preventive point of view, but merely to make good, as far as possible, the destruction produced during the progress of disease.—Professor Pickerill.

Need for Dental Legislation.—If dental disease were more obvious than it now is, there is no doubt that long ago the public mind would have been stirred and legislation would have been passed to facilitate the checking of such universal suffering. . . .

Suppose a similar condition affected the finger-nails—suppose that 90 per cent. of the community went about with decayed or suppurating finger-nails—the idea would long ago have been so revolting that extensive measures would have been adopted for the suppression of such a disease; yet the total systemic disorder and the annual loss of life would have been far less than it is from dental disease.—Professor Pickerill.

Root Filling.—The proper filling of roots is an important matter, and it would be good practice, from an educational point of view, for students to fill roots and then have them radiographed so that they could see the result. Not only should this be done on patients, but in teeth out of the mouth—i.e., under the simplest and easiest conditions. For this purpose the filling must be one that is dense to the rays, and therefore the gutta-percha points, as used in the hospital, were tested by the X-rays and proved to be sufficiently dense as to be seen in the canals of teeth.—C. A. Clark.

The Nasal Administration of Nitrous Oxide Gas.—On March 17, 1898, the late Mr. Alfred Coleman read a paper before the Society of Anæsthetists entitled: "A Method of Administering Anæsthetics through the Nose." This subject had interested Mr. Coleman for many years, and as early as 1862 he wrote a letter to "The Lancet," suggesting a method of prolonged chloroform anæsthesia by pumping the vapor through tubes ending in the nostrils; but 1898 may be taken as the year in which the administration of nitrous oxide by the nose was first employed, and Mr. Coleman may, therefore, fairly be given the credit of being the first to demonstrate the possibility of a continuous administration of nitrous oxide during operations in the mouth, for though many modifications of his apparatus may now be described, the method is essentially the same in all cases.—Dr. Probyn Williams.

Estimation of Mercury in Amalgams.—Various methods have been suggested to effect this, including careful heating of the amalgam in a small crucible provided with a gold cap having a depression in the top containing cold water to keep it cool. The cap is afterwards weighed, the increase due to the adhering mercury being noted.—P. A. E. Richards.

Treatment of Abnormalities.—The tendency with students is to treat symptoms, or signs, and to describe a method directed to the correction of more or less obvious abnormalities instead of trying to get to the root of things. Unless the various abnormalities in a mouth can be and are described accurately in words, observation is at fault, and the case has not been understood.

The order of events should be:

1. Analyze and describe the abnormalities present;
2. Summarize these, if possible, by classifying the case as a pure type or combination of types;
3. Discover the intermediate and remote etiological factors;
4. Estimate the possibilities of treatment and the extent to which the ideal must be departed from; and
5. Prescribe the exact method of treatment.—Norman G. Bennett.

Artificial Dentures.—In artificial teeth the thing is to make them fit and utilize the existing habits as closely as the foundation will bear. It is hopeless to try to impose new habits or to restore youthful ones in old people. Some of the habits acquired by edentulous people require very abnormal dentures to utilize them satisfactorily, and much discretion on the dentist's part to avoid being completely beaten by them.—D. P. Gabell.

The Mystery of Dental Caries.—I hold a firm belief that there is a special micro-organism or group of micro-organisms of "decay," and that no one has yet been clever enough to invent a method of cultivating and isolating it.—A. Hopewell-Smith.

Permanganate of Potash.—Dr. Mervyn Gordon a few years back made an investigation of disinfectants to reduce the bacteria of the living mouth and pharynx. In this investigation he tested results by counting the number of germs present in each cubic centimetre of saliva—

1. Before use of the disinfectant;
2. One hour after;
3. Two hours after.

In each case 100 c.c. of the selected preparation were "gargled" for five minutes.

The strength of the potassium permanganate was 1 in 200, and in one hour after the organisms were reduced by 90 per cent.

Two hours after the organisms were reduced by 90 per cent.

A mouth-wash of potassium permanganate being too strong to use with comfort, the value of this substance was tested in greater dilution, and it was found that 1 in 1,000 produced a reduction of over 70 per cent. at the end of the second hour, and that 1 in 5,000, and even 1 in 10,000 produced some reduction.

Dr. Mervyn Gordon adds:

“The value of potass. permang. for disinfecting mucous membranes is evidently very high.”—Dr. Harold Austen.

The Sterilization of Instruments.—All instruments which come into contact with the tissues of the mouth should be boiled before use for ten minutes at least, preferably in a solution of washing soda, one drachm to the pint, and then placed in an antiseptic solution. They should also be boiled again after use, after a mechanical cleansing.—Dr. Harold Austen.

Plaster of Paris.—So far as I can find, good dental plaster is prepared by selecting pure gypsum (alabaster), so as to secure the absence of iron, sand and such-like impurities, and heating them thoroughly to a temperature of 400° Fahrenheit (204° C.) in a rotary oven and sifting the produce—the finer the powder the better the plaster. It is entirely a mistake to suppose that common coarse plaster will produce a harder and stronger cast, or better resist the softening action of steam than a fine plaster.—D. P. Gabell.

Warming Nitrous Oxide Gas and Oxygen.—The advantages of administering anæsthetic vapors warm are many. In the case of nitrous oxide gas, there is more need of warming it than of warming any of the other general anæsthetics, for the reason that the gas is made very cold in passing from the high pressure liquefied state to the gaseous.

Some of the advantages of administering nitrous oxide and oxygen warm are:

1. A much less quantity of nitrous oxide is required when it is administered warm than when it is administered cold; the saving is from one-third to one-half;
2. Anæsthesia with warm gases is much more quickly and quietly produced than when the gases are administered cold;
3. A more tranquil anæsthesia and greater relaxation are obtained with warm than with cold gases, owing to a greater amount being taken up by the blood;
4. The warm gases ensure complete elimination of all irritating effects which cold gases have upon the respiratory tract and lungs, and thus absolutely remove all danger of post-anæsthetic troubles such as bronchitis and pneumonia.

The warm gases are administered to the patient at a temperature from 85° to 90° Fahrenheit (30° to 32° Centigrade).—Dr. Teter.

PRACTICAL POINTS.

Brittle Vulcanite Dentures.—Brittle vulcanite dentures are usually due to faulty vulcanizers, or to insufficient care being exercised in vulcanizing. For instance, if three flasks be placed in a vulcanizer on the top of each other, the rubber in the lowest flask, which stands in the water, will come out of the vulcanizer more or less brittle; the rubber in the middle flask will come out not so brittle as that in the lowest flask; while the rubber in the top flask will invariably come out properly vulcanized, and be beautifully strong and flexible.

To get the best qualities out of dental rubbers they must always be vulcanized in pure steam. We know that in busy workshops it is very difficult to observe the best conditions for vulcanizing, owing to pressure of work.

If only one flask at a time be put in the vulcanizer, it should be kept out of the water by being placed on an iron flask stool or on one or two empty flasks.

We make it a practice not to use free water in a vulcanizer, because we have always found, during the last fifty years, that the steam generated from a lump of wet plaster in addition to the plaster in the flask, has given us more uniform and better results than steam generated from free water.

In our remarks upon vulcanizing we say: "If wet plaster only is used for the generation of steam, the quantity required in two flasks will be found sufficient, but if only one flask is put in the vulcanizer a lump of wet plaster should be added."—C. Ash, Sons & Co.

Hydrofluoric Acid.—The advantages of hydrofluoric acid for dental purposes seem to be lost sight of by many dentists.

It is invaluable in the dental workroom for removing stains from artificial teeth which sometimes result from soldering, and stains on artificial teeth which are caused by the use of medicaments employed in the mouth.

It is also extremely useful for roughening the backs of mineral facings, inlays, crowns, etc., likewise for removing the glaze from the holes in diatoric teeth when increased anchorage is desired.

Further, it can be effectually employed for dulling the surfaces of artificial teeth when they are found to be too bright. When used for this purpose, the teeth are painted over with the acid for two seconds only, and the acid is then washed off with water to which a little soda has been added.

It is needless to add that the greatest care must be taken not to allow the acid to come into contact with the fingers, as it has a very harmful effect upon the skin and finger-nails. The danger of contact can be avoided by wearing India-rubber finger-stalls while using the acid.—C. Ash, Sons & Co.

Taking Modelling Compound Impressions for Full Lower Plates.—In taking an impression for a full lower denture in wax or modelling compound, it is advisable to introduce a finger between the tray and the cheeks in order to draw aside the muscular folds which are frequently caught in the impression material. The patient should be instructed to raise his tongue high in order to keep the sub-lingual muscles away from the impression.—Archiv für Zahnheilkunde.

Mending Broken Plaster Models.—For fastening together broken plaster models, the following celluloid solution can be advantageously employed: The celluloid is dissolved in equal parts of camphor and ether, adding enough celluloid to obtain a mixture of creamy consistence. The parts to be joined together are dried thoroughly, coated with the solution, pressed together firmly, and allowed to dry. The celluloid mixture is insoluble in water and is not affected by the vulcanizing process.—Archiv für Zahnheilkunde.

Correcting the Fit of Loose or Misfit Plates without Re-making.—The palatal side of the plate is etched with an engine bur. Over this surface a thin film of vulcanite rubber dissolved in chloroform is applied, and allowed to dry five or ten minutes; to this a vulcanizable rubber paste is applied. An impression is taken in the paste, the object being to force out any excess of paste. The paste that remains on the plate compensates for any defect in the fit. The impression is then flaked with one pour of plaster, and vulcanized for the same time and at the same temperature as the usual vulcanite rubber.—G. L. Bridgford, Western Dental Journal.

Cocaine Habit acquired after Dental Treatment.—Dr. James A. Colton, dental inspector of the public schools in Providence, R.I., points out that the use of anæsthetics for the relief of pain may lead to serious results; reporting as follows:

“I desire to call attention to three cases which have come under my observation quite recently. Three boys of grammar-school age have become pronounced cocaine victims from the employment of this drug, which was first used, according to their story, to relieve the suffering resulting from dental disease.”—British Journal of Dental Science.

Packing Vulcanite Dentures.—After separating the flask and washing out all the wax first by means of boiling water, then by flowing chloroform around the pins of the teeth, the labial and buccal surfaces where the pink rubber is to be packed are painted with a solution of red rubber dissolved in chloroform. This facilitates placing the pink rubber in the desired places, especially the triangular spaces between the teeth, without the inconvenience of its being continually displaced, so that it must be

held there during the entire packing operation. A well-stoppered bottle of the red rubber solution should always be kept on hand. After vulcanizing, the shallow coat of red rubber covering the pink can be polished off by a few turns of a sandpaper chuck.—A. C. Breckenridge, *Western Dental Journal*.

Suggestions regarding Nitrous Oxide Anæsthesia.—Snoring after the administration of nitrous oxide for a short period of time and laryngeal stertor must be carefully discriminated. Patients with thick pendulous uvulæ begin to snore a few seconds after inhalation has commenced. This is also true of patients having postnasal adenoids and enlarged tonsils; also those having loose, baggy cheeks. To presume such snoring to be a sign of anæsthesia and to operate with no further testimony to the fact that anæsthesia has ensued would be committing an egregious blunder. Snoring per se is not stertor. True stertor is caused by the vibration of the aryteno-epiglottidean folds, and is more musical. A group of symptoms showing that anæsthesia has ensued would be a far safer guide to the anæsthetist, and would be more scientific. Patients will snore and yet not be anæsthetized. Breathing should be watched very carefully, but if the kind of breathing would indicate anæsthesia, and still the conjunctival reflex persists, the return to consciousness will be very rapid. The following changes are to be noted: Duskiness of skin; ears and finger-tips darker; pupils dilated; eyes dull and expressionless; squinting, and, if pure nitrous oxide minus oxygen be administered to children, early jactitation occur, which will often preclude the possibility of an operation. Quivering of the orbicularis palpebrarum warns us that jactitation is about to commence. Oxygen administered with nitrous oxide at this time is advantageous, because the anæsthetic qualities of the nitrous oxide progress and the asphyxial symptoms are abolished.—C. F. B. Stowell, *Dentist's Record*.

Restoring an Incisal Corner with Silicate Cement and Gold.—A number of cases present in which an incisal corner of an anterior tooth has been destroyed by caries or by trauma. Restoration with gold would mean a large unsightly and most conspicuous defect in appearance. A porcelain inlay may not be desirable. The dilemma may be solved by preparing the cavity as for a gold inlay, cutting the frail labial enamel away to where it is supported by sound dentine. If caries has approached the junction of the lobes of the tooth, it is best to cut to the labial groove. If the pulp has been involved, as it is likely to be, anchorage may be secured by a pin in the root-canal; otherwise, anchorage must be obtained by an extension lingually. After preparing the cavity, inlay pattern wax is pressed into the cavity, and wax is carved to the desired contour. Finally, before removing the pattern, with a sharp hatchet excavator, in the labial surface of the wax, an undercut cavity is prepared for the recep-

tion of a silicate cement filling in the prospective inlay. A margin of wax is left on the approximal side, also on the incisal edge of the wax pattern, to secure retention and incisal strength. The wax pattern is removed on a sprue wire, invested, and cast. If necessary, after casting, the cavity in the inlay can be touched up or the undercuts improved. The inlay is cemented to place with oxyphosphate cement; then the labial cavity is filled with a silicate cement filling, and the small margins of gold will be not at all conspicuous. Thus the æsthetic appearance of the silicate filling is combined with the strength of a gold inlay.—R. E. MacDonald, Dental Practice.

Silver Inlays: Cautionary.—Those who are tempted to economize by using silver, pure or alloyed, for cast or matrix inlays will do well to remember that silver is an uncertain metal in the mouth. In some mouths it remains clean and bright for years, apparently without change; in others it corrodes rapidly: silver dentures are occasionally destroyed in six months' time.—The Dental Brief.

Painless Excavation of a Hypersensitive Tooth Affected with Pericementitis, by the Application of Cement.—The painful tooth, with the two approximating teeth, mesially and distally, as well as the gingivæ, are thoroughly dried with cotton and hot air, and thinly mixed cement is applied rather thickly upon the lingual and buccal surfaces of the three teeth, also the gingivæ, the cement to be carried into the interproximal spaces. The masticating surfaces of the sound teeth may also be covered, leaving only the masticating surface of the diseased tooth free of cement. The cement is then allowed to harden, the patient being requested to leave the mouth open from five to ten minutes. After the cement has hardened completely, the diseased tooth can be excavated with new sharp burs under light pressure. The hypersensitive tooth is held firmly in position by the cement, and no pressure is exerted upon the inflamed pericementum and alveolus.

If approximating teeth are missing, the tooth may be surrounded with a layer of cement covering the gingiva, but leaving the masticating surface exposed. After the cement has hardened, the tooth can be opened without pain. By attaching a silk thread around the neck of the tooth, and having the patient or assistant exert a constant, rather strong pull upon the tooth, the pain of opening up a tooth affected with pericementitis can be reduced considerably.—*Deutsche Zahnärztliche Zeitung*.

Facilitating the Cutting of Aluminium.—Aluminium can be cut more easily and without damage by laying it on a flat surface, polishing it, and cutting with a knife dipped in paraffin oil.—R. Moeller, *Zeitschrift für Zahnheilkunde*.

Cleaning Files.—Clogged files can be cleaned with ether, with benzine, or with spirits of turpentine and a stiff brush.—Journ. Dentaire Belge.

Retarding the Setting of Plaster.—To make plaster set slowly, it is mixed with vinegar instead of water.—R. Moeller, Zeitschrift für Zahnheilkunde.

Relieving Pain after Extraction.—An excellent remedy for pain after extraction consists in swabbing out the socket with pure lysol.—P. A. Ash, Commonwealth Dental Review.

Potassium Cyanide as a Flux in Soldering.—Potassium cyanide is more desirable as a flux than borax, when the investment is weak or the solder is to be run into a hole.—C. H. Neill, Dental Digest.

Sterilizing Wax.—Wax is sterilized by boiling it for half an hour in a large vessel containing water to every litre of which 140 grammes of oxalic acid has been added.—R. Moeller, Zeitschrift für Zahnheilkunde.

Gum Camphor for Adapting Inlay Matrices.—Gum camphor, packed into the partly adapted inlay matrix, serves to swage the metal to a close adaptation, and when burned out leaves no residue.—C. H. Neill, Dental Digest.

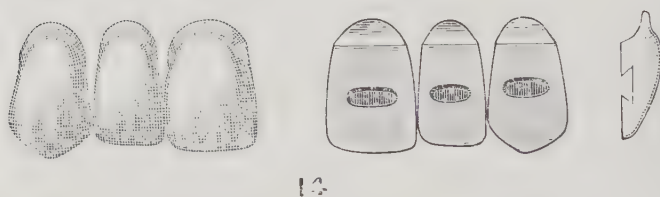
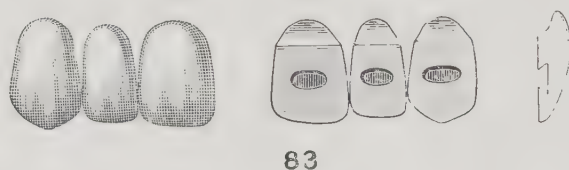
Softening Rubber before Packing a Plate.—Copper screening, such as may be obtained in any hardware store, makes the best support for softening rubber over steaming water while packing flasks.—C. H. Neill, Dental Digest.

Ash's Repair Facings

Made in the patterns shown in booklet which can be had on application, and supplied in sets of 6, sets of 4, pairs and odd.

The three sizes here illustrated are intended to show the distinctive feature to which we wish to draw attention, viz., the oval cavity in the back of each.

They can be used for repairing nearly every kind of denture; they are easily applied, exceedingly durable, and can be quickly fitted—it does not take longer than from 10 to 15 minutes to fit one.



They are invaluable for repairs to Bridges, and in all cases of Plate and Crown work in which a flat tooth has to be replaced.

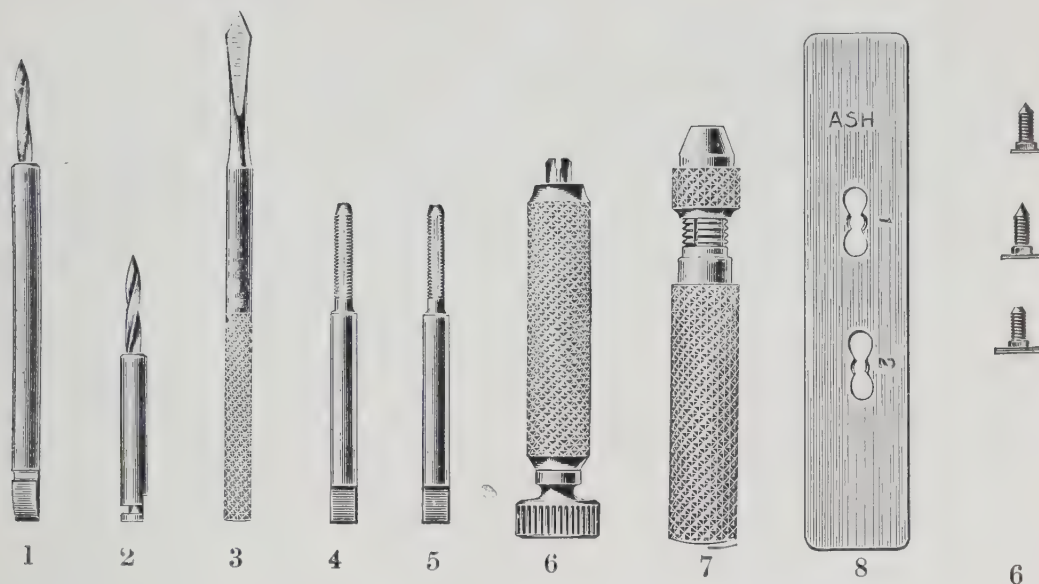
The oval cavity at the back of each Facing corresponds with the positions of pins in our Flat Pin Teeth. The Facings do not require backing, but can be applied to the backings of fractured or broken teeth when the broken portions of mineral have been removed from the backings.

IMPORTANT NOTE.

For attaching these Repair Facings to teeth backings, etc., we recommend our **C.A.S. Cement**, or our **Inlay and Crown Cement**.

Ash's Repair Facing Outfit

Suggested by MR. H. J. CORIN, L.D.S. Eng.



Figs. 1 and 2, Twist Drills for Straight and Right Angle for drilling hole in backing.

Fig. 3, Countersinking Tool for removing burred edge and countersinking the hole.

Figs. 4 and 5; Screw Taps, large and small.

Fig. 6, Holder for carrying Gold Stud and screwing it into position.

Fig. 7, Holder for carrying small and large Screw Taps, Figs. 4 and 5.

Fig. 8, Screw Plate for the Dentist's use in making his own Gold Studs, should he desire to do so.

Fig. 9, Small, medium, and large Gold Studs.

DIRECTIONS FOR USE:

In the event of a tooth breaking off a bridge or a plate and bringing away with it one of the pins, leaving the other standing in the backing, cut off the standing pin, grind the backing flat with a small carborundum point, drill a hole in the centre of the backing, remove the burred edge formed by the drill, with the countersinking tool, tap the hole with the small tap (Fig. 5), follow on with the large tap (Fig. 4); again clear away the burred edge with the countersinking tool, fix the stud selected in holder (Fig. 6), and screw it into position right up to the shoulder. The case is now ready for the Repair Facing to be cemented on the stud.

To cement a Repair Facing on the Stud.—Select a Repair Facing of the same size as the broken-off tooth, remove all traces of wax from it, thoroughly cleanse it and the backing with chloroform or pure alcohol; mix C.A.S. Cement or Ash's Inlay and Crown Cement to a thin creamy consistency, smear the backing and the back of the Facing with it, also fill up the undercuts in the oval cavity of the Facing, press the Facing to place, hold it firmly in position for four or five minutes, then trim away excess of cement and coat the exposed edge with Ash's Varnish.

NOTES.

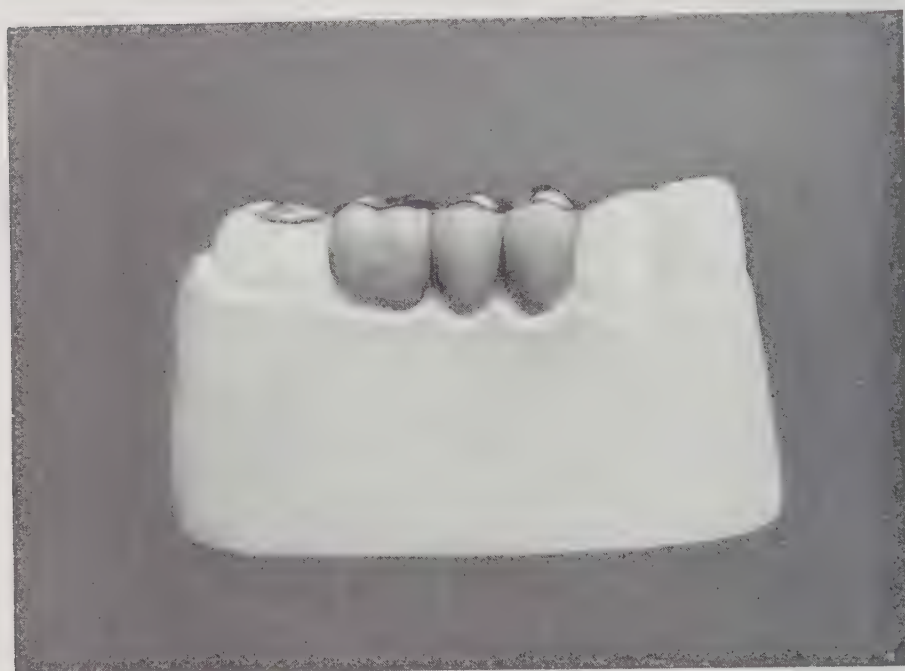
1. The method described above is applicable when both pins come away with the tooth.

2. Should both pins be left standing, in the space left by a broken-off tooth, a Repair Facing can be cemented on them.

Ash's Repair Facing Outfit—*Continued*

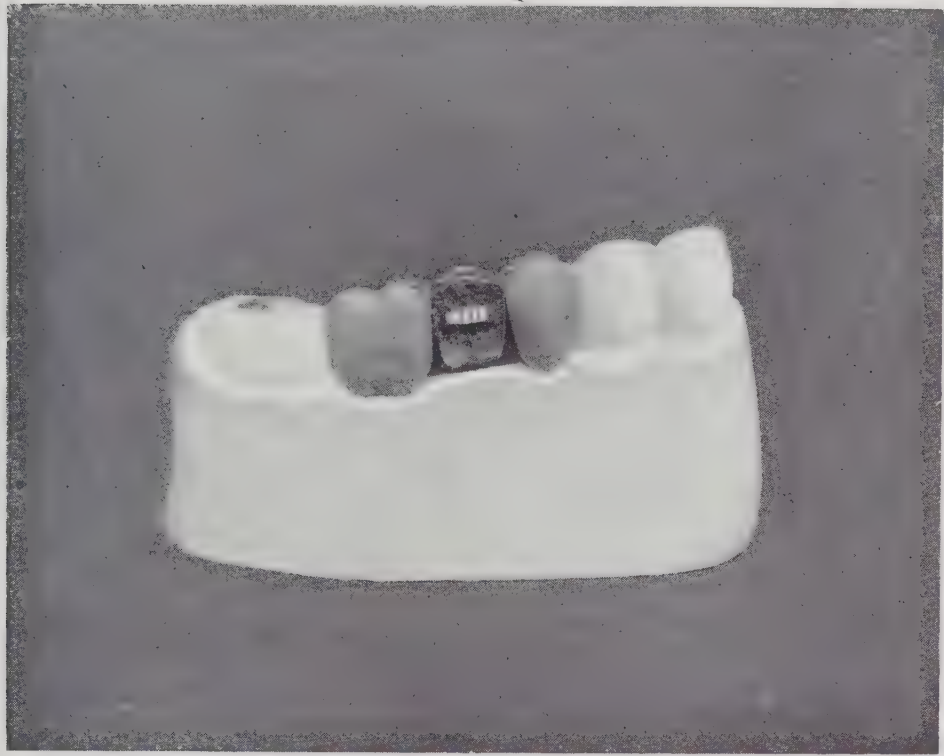


A—Broken Pin. B—Pin left standing.
C—Spot where new hole should be drilled and tapped.



Repair Facing cemented on to Stud.

Ash's Repair Facing Outfit—*Continued*



PRICES

Repair Facing Outfit as per Illustration	-	\$5.00
Repair Facings, each	- - - - -	.18
Extra Gold Studs	- - - - -	.40

Send a Mail Order NOW for one of these
valuable Repair Outfits and be ready for
the next case of repair : : : :

Claudius Ash, Sons & Co., Limited

The Mosley Angle Holder

A New Instrument—One That YOU Need

THIS Angle Holder is equipped with five different instrument points that have been selected as the most useful for operations in the more inaccessible cavities.

Chisel, Burnisher, Approximal Blade, Broach Holder and Orthodontia Wrench

The holder is a positive locking device allowing the different instruments to be held at various angles and twists. The principle involved is a great advance over the old ball and socket fixture and ensures rigidity of the point.



The attachment for holding broaches and cleansers is the most positive of all holders, and allows of any length broach being used. Cut off the broach to the required length, being sure that enough of the shaft remains after it has been inserted in the attachment to engage with inside bottom of the screw socket. To remove, simply force the broach backwards through the attachment.

For Further Description see Opposite Page

The Chisel will be found most useful in operations on all posterior teeth, and is invaluable in preparing cavities for inlays in the distal surfaces of the bicuspid and molar region, heretofore inaccessible except with a burring instrument.

The thin approximal blade will commend itself to all practitioners for shaping up the wax form in the cavity and as an assistant in removing it, as well as being useful for burnishing plastic fillings.

The double headed burnisher and approximal instrument is almost indispensable for all plastic operations

The Orthodontia Wrench will be found invaluable to all those who practice the regulation of teeth. It allows the operator to adjust the regulating nuts, no matter at what angle they may be at.



In neat Cardboard Box \$3.75 complete

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$\frac{1}{8}$ oz.		.. .		-	\$ 3.50
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Unsurpassed in colour and working qualities.

A leading Toronto Dentist says :—"The best Solder I have ever used."

14 kt.....	\$.65 dwt.
16 kt.....	.75 "
18 kt.....	.85 "
20 kt.....	.95 "
22 kt.....	1.05 "

In quantities of 1 oz. ordered at one time, Cash with order, 3% discount is deducted.

An ounce Gold order may be made up of various kinds of Plate and Solder.

Ash's Dental Alloy Wire

Square and Round - \$1.12½ dwt.

Sold only in lengths of 2 dwts. each

This wire is very rigid, being composed of Platinum and Silver and is high fusing enough to admit of pure gold being soldered to it.

When Buying a Quantity of Dimelow Detachable Facings

You receive a greater result in the quantity of facings for a given sum of money than with other teeth.

You do not lock up a considerable sum in backings. You make them up as you require them at a minimum cost of both time and material and every laboratory is already equipped with all the necessary tools.

Send a mail order for Dimelows for your next case.

PRICES

Per Tooth	.25
108 Teeth	25.00
228 Teeth	50.00
Anterior Staples	.05
Posterior Staples	.10

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The HEATLESS DENTAL WHEEL is a hundred per cent. better than any other in the world.

It does not heat or discolour the tooth—the patient suffers less pain and hardly any discomfort when you use a HEATLESS WHEEL.

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It costs less and cuts faster and better than any other wheel made.

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Most of our sales for these stools are made to dentists who have been practising ten years or more.

Invariably these customers tell us in a short while that they should have operated from a stool years before. They have locked the door after the horse has been stolen.

Your years of usefulness will be greatly lengthened if you use a stool early in your career, and you will save yourself many a tired day and troublesome backache.

Price \$17.00

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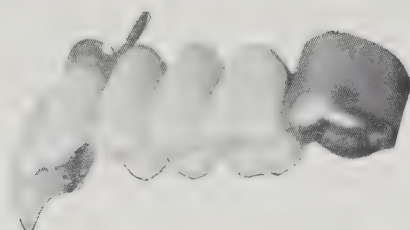
A nice assortment of these bottles all labelled, makes a good impression. The labels on these bottles are burned on and are therefore practically indestructible.

We carry a good assortment of these labelled for the most popular drugs, but we will have any labels burned to your order.

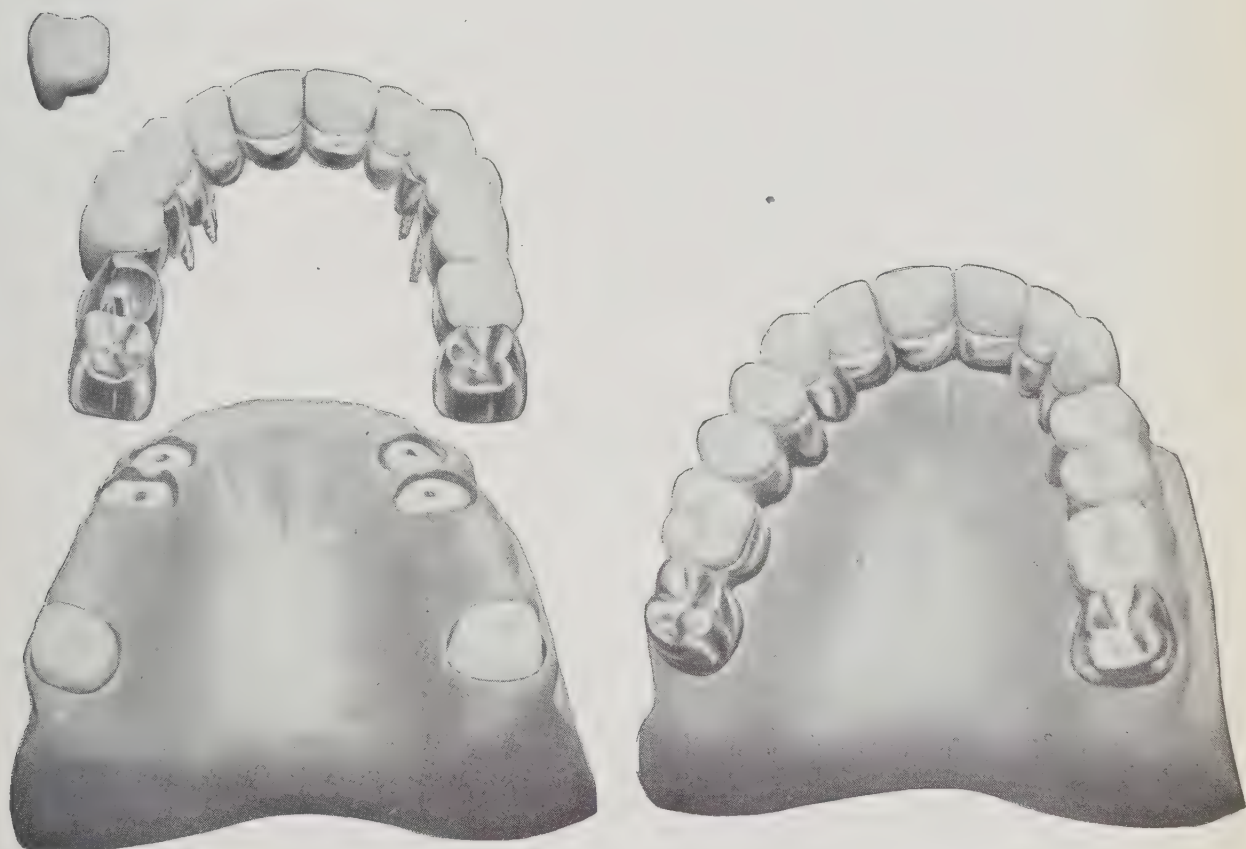
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If you desire any of these Teeth, send your mail order to us, as we have the only stock of these teeth in Canada. Our assortment comprising **every mould and shade.**



PRICES

Goslee Teeth without Pin	-	-	-	\$.35
Goslee Teeth without Pin per case of 100				30.00
Assortment B—370 Teeth and an assortment of Pins in handsome case	-			-\$100.00

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I S.S.W. Metal Fountain Cuspidor		
I Leighton-Jacks Switch Board. Onyx Face and Shelf. Nearly new. Perfect condition. 110 Volts. 60 Cycles alternating. Price including Electro Dental H.A. Syringe		100
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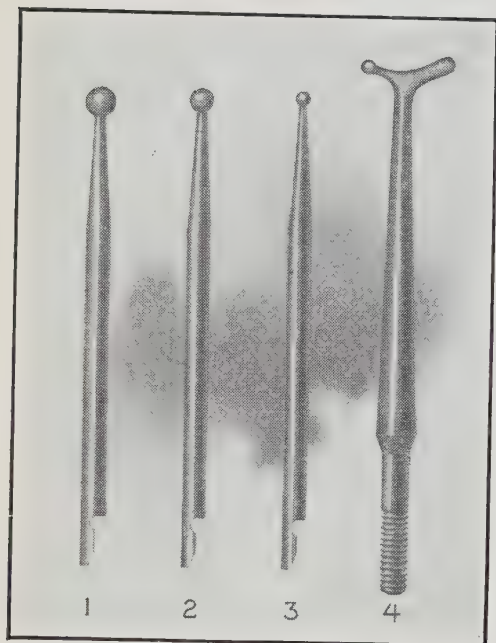
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Tantalum is more valuable than gold and can be sterilized in an acid solution that would dissolve gold or platinum.

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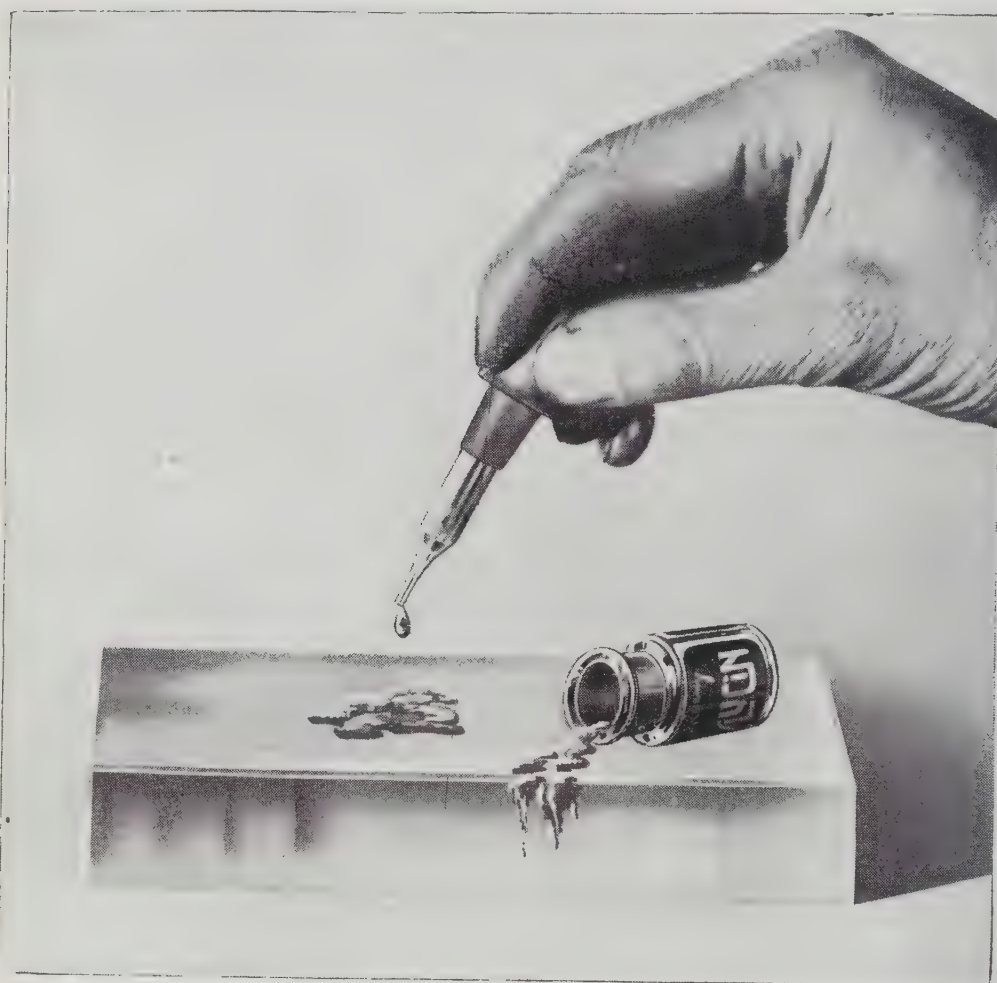
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If the liquid* of a silicate cement is affected by atmosphere, the chemical union of the powder and liquid is not the same with the last half as with the first half of the bottle of liquid.

If the materials are properly balanced when the liquid is fresh, they are not properly balanced when the liquid is partially used.

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The liquid of TRANSLUCIN is not affected by the atmosphere

The last drop of liquid will produce exactly the same results as the first.

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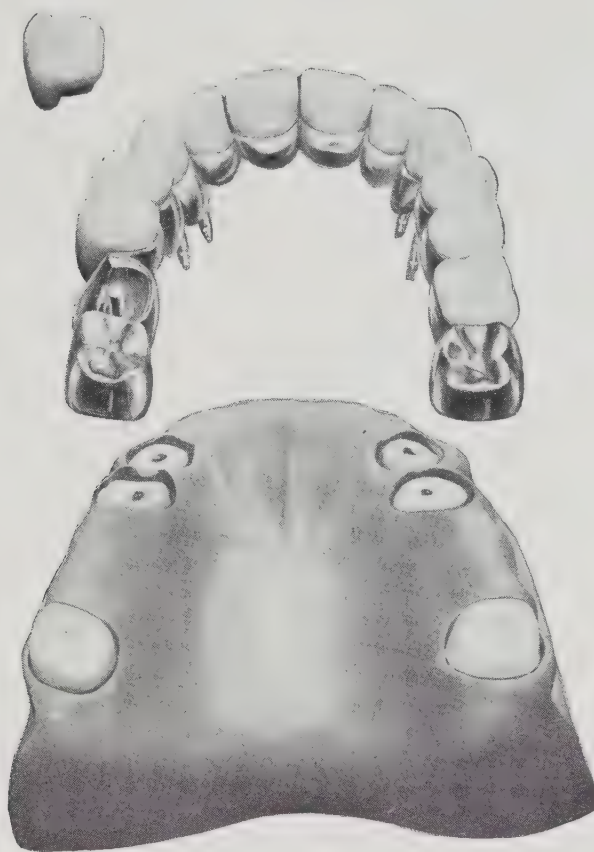
It has no effect upon the pulp and will not discolor in the mouth.

Order a package from your dealer and if it falls short of our claims to the slightest extent, send back what is left and he will credit you full price charged.

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Cuts Illustrate our Goslee Bridge-work

Cast Aluminum Plates
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**Has less Acid in its Liquid than any of the
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THAT means that the life of pulps is not endangered. The small percentage of acid causes the primary setting, while the secondary or final setting is the same in nature as in Portland Cement.

To secure a liquid with a minimum of acid that will cause proper crystallization requires a delicate balance between the several elements in the liquid. Therefore, the liquid bottles must be kept securely capped that no element may escape through evaporation.

A cement liquid that requires no care, for its proper keeping is usually a liquid that is principally phosphoric acid; the more it evaporates the heavier it gets, and the greater its menace to pulps.

The manipulation of Synthetic Porcelain is simple, yet there are a few necessary principles, set forth in the instructions.

This rule always applies: There is a right way and a wrong way to do everything; and a material that doesn't require a precise form of treatment doesn't give a precise result.

Synthetic Porcelain is as translucent as the tooth itself; it cannot injure pulps, cannot discolor, unless some foreign element is introduced to cause discoloration, and it endures indefinitely.

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Most dentists have long been familiar with Caulk's Copper Cement (Black). They know its sedative and preservative properties, its tenacity and endurance.

In the introduction of *White* Copper we do not wish to displace Black Copper; we merely present a cement of a less objectionable color than the old material.

We call attention to the fact that in any form the tendency of Copper is to discolor. For this reason we do not advise its use in the anterior teeth.

But our WHITE COPPER CEMENT in most mouths will change shade but slightly, and is in appearance far preferable to the usual Copper Cements.

It isn't all Copper, but contains Zinc specially prepared to make the combination most happy.

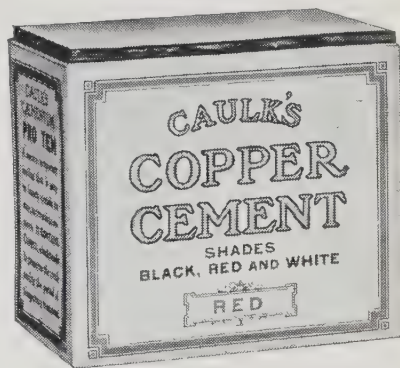
Actual bacteriological tests have proved that a percentage of copper in a cement gives the same sedative and germicidal effect as one that is all copper, and thus the objectionable features of a copper cement are largely overcome.

The tenacity of this cement is very great and its strength and endurance are remarkable.

If not using it, write for a sample.

Caulk's Copper Cement is also made in shades of Red and Black

Per Package - - \$1.50



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Griswold, Morgan, Roach Bennett Bar, Fossum semi-removable and Gilmore attachments

Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

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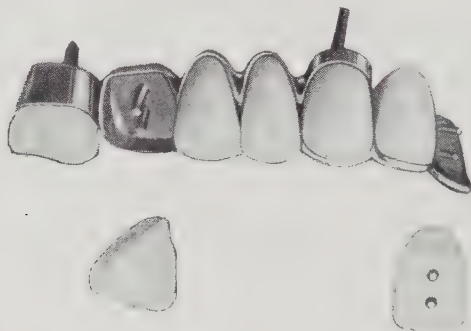
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Gold Crowns : Cen. Lat. Cus.	
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Teeth extra	

Gold Inlays	
(Send wax impression packed in tissue paper)	
Casting only - - -	.75
Gold - - -	.05 per gr.
Rubber Dentures—	
Plate Work, \$2.50 to \$3.00 (Partials \$2 00)	
Swaging metal plates (swaging only) Aluminium - -	\$3.00
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Casting Aluminium plates (cast only) - - -	\$4.00
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All teeth charged extra at market price	
Send impressions (unpoured) plaster preferred, for all classes of work including metal work.	

SEND A TRIAL ORDER.

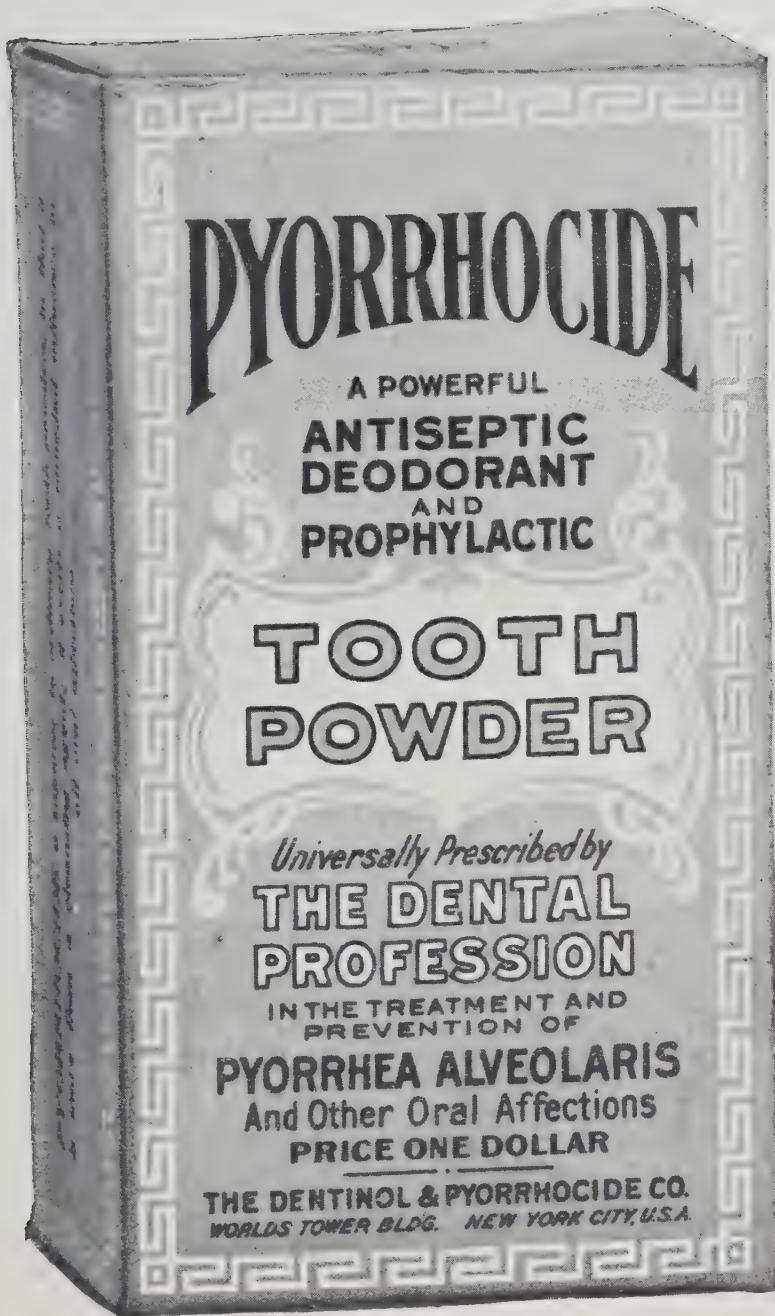
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Instead of suggesting to patients the use of "some good centrifrice" prescribe

PYORRHOCIDE and specifically insist upon its regular daily use.

Results always prove its distinctive superiority with satisfaction to both patient and practitioner.

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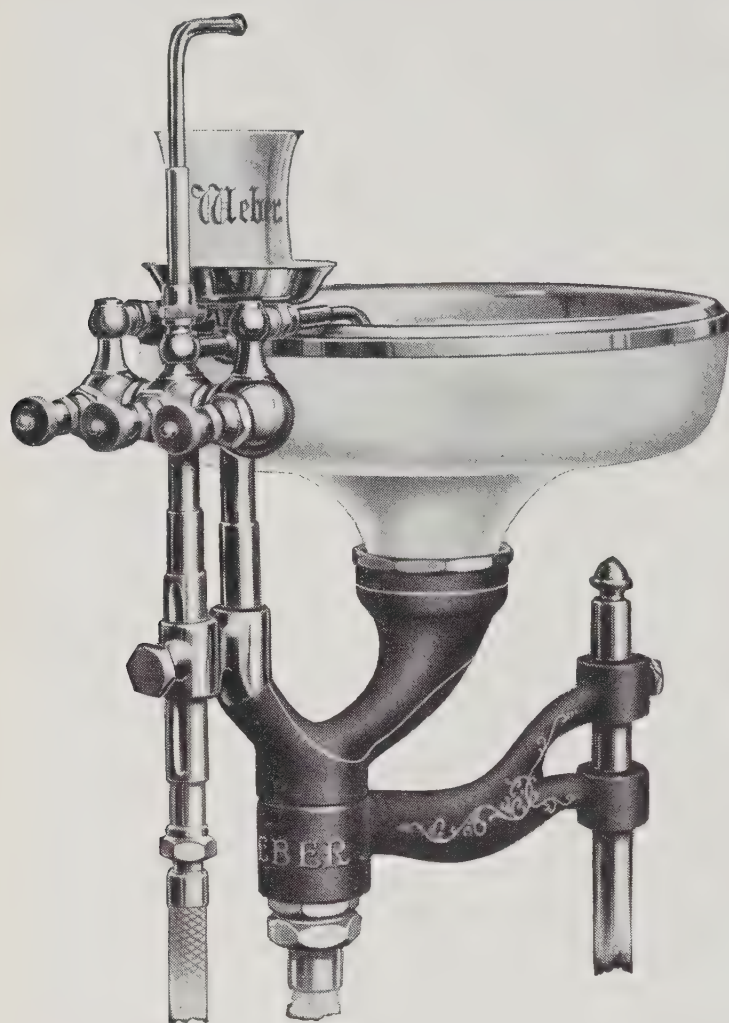
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Blown Lead Glass Bowl with no Creases or Laps

Requires less than one-half the amount of water
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All secretions dropped into the bowl are carried out
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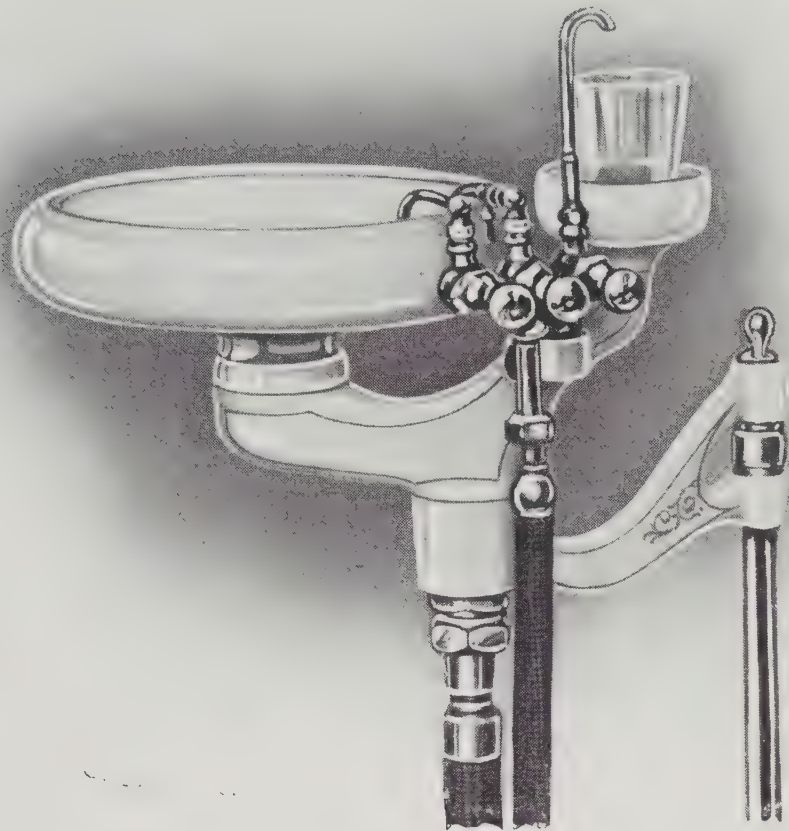
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CANTON, OHIO, U.S.A.

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NEY'S GOLD DISCS.

Any Gauge Nos. 14, 15, 16, 17, 18, 19.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
20K Dark or Light.....	\$0.98 dwt.	\$0.93 dwt.	\$0.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.

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In 1, 1½, 2 and 5 dwts.

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20K Dark or Light.....	.98 dwt.	.93 dwt.	.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.
Far Superior Non-Shrinkable.....	1.35 dwt.	1.30 dwt.	1.25 dwt.

NEY'S GOLD PLATE.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
10K Dark or Light.....	\$0.58 dwt.	\$0.53 dwt.	\$0.51 dwt.
12K Dark or Light.....	.66 dwt.	.61 dwt.	.59 dwt.
14K Dark or Light.....	.75 dwt.	.70 dwt.	.69 dwt.
16K Dark or Light.....	.85 dwt.	.80 dwt.	.79 dwt.
18K Dark or Light.....	.89 dwt.	.84 dwt.	.83 dwt.
20K Dark or Light.....	.97 dwt.	.92 dwt.	.91 dwt.
21K Dark or Light.....	1.03 dwt.	.98 dwt.	.97 dwt.
Coin	1.04 dwt.	.99 dwt.	.98 dwt.
22K Dark or Light.....	1.05 dwt.	1.00 dwt.	.99 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.14 dwt.	1.09 dwt.	1.08 dwt.
Clasp Plate	1.30 dwt.	1.25 dwt.	1.20 dwt.
Green Gold for backing.....	1.03 dwt.	.98 dwt.	.95 dwt.
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24K Matrix (.003 thick).....	1.20 dwt.	1.15 dwt.	1.12 dwt.

Crown metal, Gold on one side, Platinum on the other.

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The above quantity rates may be allowed on 20 dwt. and 100 dwt. assorted lots, each item being charged at its respective rate.

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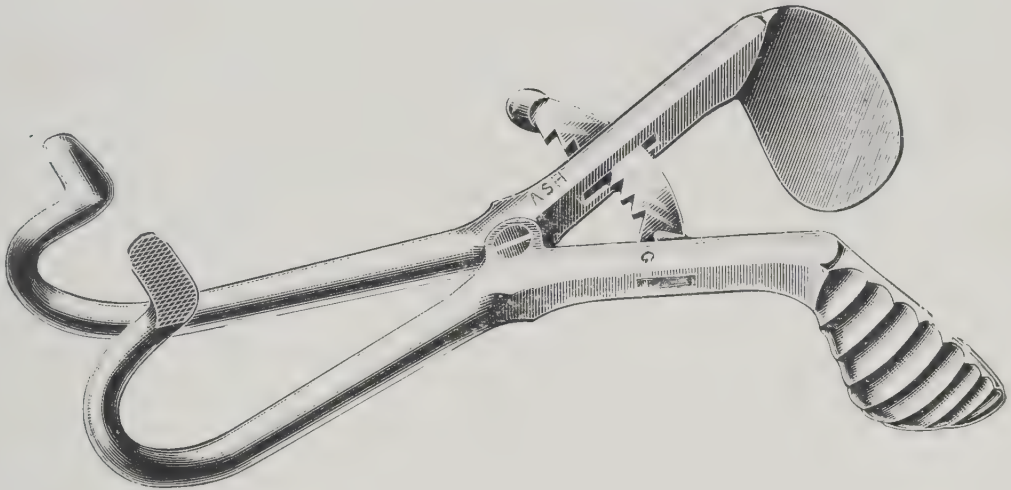
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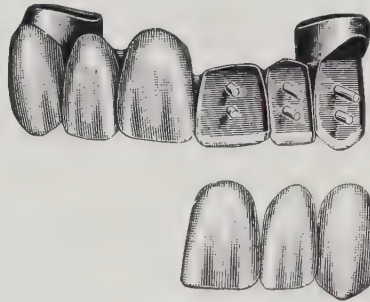
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STEAM is no stronger now
than it was one hundred
years ago, but it is put to
better use.—*Emerson*



Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, JANUARY 1, 1914

No. 4

ORAL PROPHYLAXIS.

By PERCY FURNIVALL, L.D.S., ENG.

Cursory observation of those one meets in the streets proves the need of the many for instruction in better oral prophylaxis, and to this end will you allow me space in your columns for the following remarks?

That a clean tooth will not decay is undeniable, and the difficulty of cleansing between closely set teeth and to the bottoms of grooves and pits where the enamel is invaginated, accounts for such places having a higher percentage of decay than others more accessible to the scrubbing of the tooth-brush—most usually employed to scrub on to the teeth one of the many combinations of powdered chalk and soap. That such a method is still used is due to tradition and thoughtlessness. One has only to use one of these preparations for cleansing a greasy dinner plate—soiled by the same agency as the mouth, but infinitely easier to clean—to realize the uselessness of the combination for a cavity abounding with surfaces impossible to scrub, as does the mouth. Even on accessible surfaces the immediate good obtained by such abrasive cleansing, negligible though it be, is paid for dearly in the future, as the daily loss of protective covering where, owing to its thinness or softness, the enamel is rubbed away, results in the formation of sensitive areas, each demanding treatment for comfort's sake. The damage is not confined to the teeth, as the gums, resenting the stimulus of the daily scouring, after a time recede, leaving the neck of the tooth bare. Also, the patient's tendency to deposit salivary calculus or tartar upon the teeth is increased, as the average patient rarely rinses the mouth free from the chalky matter of the powder or paste, and this increases by chemical attraction the rate of the deposit and itself goes to form it.

One may be excused for wondering why the use of sterilized water for cleansing the mouth has not been more generally insisted upon, since few would use unsterilized water for making a

hypodermic injection. It appears reasonable to assume that, if suppuration can be induced by infective hypodermic solutions, the same will happen if infective water is scrubbed on gums of weak resistance, only the process of breaking down of the gum in the latter case takes a much longer time to bring about. One has only to examine the condition of the average cistern, usually under the roof and badly covered, or well water which may have drained through from an adjacent cesspool, to admit the need of increased care in dealing with this, the main avenue by which infection enters the mouth.

Ideal oral prophylaxis, then, demands that the necessary water should be sterilized, that silk should be passed between the teeth to remove food débris, and that the dentifrice should be completely soluble in water, so that the mouth can be easily rinsed free from it; that it should have a solvent action on fat, the binding medium by which the agents of decay are maintained on tooth surfaces, thus allowing the bactericidal action which it should possess to operate on the actual surface of tooth or gum. It should have no harmful action on tooth tissue or gum, and should be sedative to sensitive conditions of both.

In the writer's experience of the last twelve years the following combination has proved most useful and fulfils the foregoing requirements best:—

R Lysol pure, 6 parts;
Chloroform pure, 2 parts.
Mix.

The patient is instructed to begin using fifteen drops to half a pint of sterile water, as it is stimulant to diseased gums, and if used too strong at first occasions smarting. After a few days' toleration increases as the tone of the tissues improves, and the strength can be increased up to a drachm to half a pint of water. To get the best effect it should be held in the mouth, say, twenty seconds for each mouthful, and should be well brushed over the teeth and top of tongue, and the mouth rinsed finally with sterile water. The brush should be rinsed clean, dried, and kept in a clean place.

In dental practice the combination, diluted as described, is recommended for use before and after extractions, for preceding sealings, to abort gingival suppuration. In a case of specific perforation of the soft palate and rhinitis of twenty years' standing I found that it worked like a charm. It should supply a ready means of ensuring oral cleanliness in schools, etc., where expense is an object.—The Lancet.

TEETH 2,500 YEARS OLD.

Dentists on the Superiority of the Egyptians.

When the Stomatological section of the Medical Congress had its first session at the Dental Hospital, Leicester Square, on August 6, 1913, dentists from all over Europe and America brought greetings to the Congress.

The first scientific paper was delivered in English. It was the result of an examination by Dr. J. G. Turner and Mr. J. J. Bennett of 435 teeth which had been found among the Egyptian remains by Professor Petrie.

Instead of showing lantern slides, the lecturers showed the actual specimens, so that every member of the audience in turn could examine with magnifying glasses teeth which had grown in an Egyptian jaw 2,500 years ago. The problem to be discussed was as to the amount and cause of the decay in the teeth. Examination had shown, he said, that only 16.78 per cent. of the teeth showed any signs of caries at all, while it might be taken that of modern teeth 52 per cent. showed signs of caries.

The overwhelming percentage of the superiority of Egyptian teeth over modern teeth would have to be explained by the difference in the feeding. Egyptian bread was made from cereals which had been coarsely ground between stones, and it was subsequently badly cooked. The result was that the particles of flour were large, and in eating they could not be forced into the interstices, or any small cavities which might be there, so that the processes of decay could not be set up.

The conclusion the lecturers drew was that the inferiority of modern teeth was due to the finer grinding of flour.—Evening News, August 6, 1913.

NOTES OF INTEREST.

Dental Disease.—With a profession professing an adequate knowledge of the pathology of the teeth, and basing their treatment on that knowledge, aided by the intelligent education of the public, dental diseases will, I feel confident, rapidly disappear from our midst, until, perhaps, in less than half a century, from being a universal scourge it will have shrunk to insignificant proportions.—J. F. Colyer.

Pulp Cavities, Etc.—There is no better anaesthetic than nitrous oxide and oxygen for use in cases in which **drilling into pulp cavities and simply opening up the antrum** is to be done. The absence of all jactitation and irregular breathing renders such operations far easier of performance than when nitrous oxide is used free from oxygen.—Sir Frederic Hewitt.

Artificial Crowns.—Artificial crowns should, as nearly as possible, restore the appearance and function of the natural teeth. Moreover, by their presence they should afford no more opportunity for the action of disease-producing agencies than when a natural crown is upon a pulpless root. This rule is impossible of exact fulfilment, but it is possible that by a correct artificial crown, properly placed upon a healthy root, the possibilities of diseased processes arising may be reduced to a minimum.—Burchard and Peeso.

Porcelain Crowns.—Porcelain crowns should have the porcelain protected against fracture, either by the inherent strength of all-porcelain crowns themselves—their bulk supplying the strength required—or, if a porcelain facing, the facing should be protected by a metallic backing against the force or shocks of mastication.—Burchard and Peeso.

All-Gold Crowns.—As a general rule, no root anterior to the second bicuspid should be crowned with an all-gold crown. None of the incisors or canines should show any but a porcelain surface.—Burchard and Peeso.

Fixed Bridges.—The introduction of immovable “bridge” dentures has undoubtedly in a great many cases caused so much discomfort and irritation to surrounding tissues, as to render mastication almost impossible, and it is doubtful whether extensive operations of this class, considered from their hygienic relations, are as satisfactory as properly planned and constructed removable dentures retained in position by atmospheric pressure.—Charles J. Essig.

Removable Bridges.—With the advent of removable bridges, the possibilities of bridge-work have been greatly increased. In many cases where it would be inexpedient to put a fixed bridge, a perfectly satisfactory and lasting removable bridge may be placed. This is true, for instance, of the lower jaw where all the molars have been lost. These teeth may be restored by the use of removable extension saddles—a restitution not to be thought of by means of fixed bridge-work.—Burchard and Peeso.

Lead-Poisoning.—In chronic lead-poisoning (plumbism) a blue line is often found on the margin of the gums round the teeth. Where there are no teeth it is absent. It is due to the deposit in the gum of lead sulphide, the lead circulating in the blood finding its complement of sulphur in the débris stagnant round the teeth. Sometimes inhalation of lead dust or vapours leads to a blue deposit on the gum. This deposit can be removed mechanically. The “lead-line” may be an early sign of plumbism.—J. G. Turner.

Investing Material.—A good investment may be made of three parts sand to one of fine plaster, by measure. The sand should be free from other earths, organic matter, or particles of mica; one-third should be quicksand, and the remainder of varying fineness up to the size that will pass through a milk-strainer screen.—W. C. Gowan.

Plastic Fillings.—Plastic fillings may be divided into three main classes:—

1. Dental Amalgams—metallic alloys containing mercury.
 2. Osteo-plastic Cements—inorganic compounds resulting from the union of a powder with a liquid.
 3. Compounds—largely organic, containing gutta-percha.
- Montagu F. Hopson.

Matrix for Porcelain Inlay.—No method of swaging the matrix on a model can, as a rule, give as good a fit and as sharp a margin as can be obtained by directly burnishing the foil to the cavity itself.—J. B. Parfitt.

Cavity Preparation.—Dentine when cut is much less painful than when scraped; therefore all instruments should be applied at such an angle that real cutting takes place. Too much stress cannot be laid upon this point.—J. A. Woods.

Bleaching by Electric Current.—To bleach discolored teeth with the aid of the electric current, due consideration must be given, as in ordinary bleaching, to the cause of the discoloration and the nature of the stain. If the coloring matter responsible for the discoloration is of purely organic origin, the possibility of bleaching by this method is a valuable aid in this difficult problem; if, however, it is inorganic, the difficulty of transforming such matter into translucent substance is very much increased. Where organic stains are concerned, bleaching can readily be effected by using 25 per cent. ethereal solution of hydrogen peroxide made into an aqueous solution by adding half the volume of water, with a small quantity of sodium sulphate, and then dispelling the ether of the hydrogen peroxide by evaporating over a warm water bath. The hydrogen peroxide is practically a non-conductor of current in the pure state; the addition of water and sodium sulphate makes it highly conducive. A tooth to be bleached requires special preparation; the rubber-dam should be applied, and the root-canal cleansed, and filled at the apex only with gutta-percha; the bleaching liquid, which is the solution electrode, should penetrate the length of the root-canal to the filling of gutta-percha, because a dead tooth offers great resistance to current. (Six to ten volts applied in a cavity of a dead tooth will only admit of perhaps one milliam-

père of current strength, but if the current is conducted well into the root the resistance is lessened and a greater current strength obtained with less volts). The peroxide of hydrogen should be applied on cotton-wool passed well into the canals, and a platinum electrode used in the same manner as for obtunding. Care should be exercised that the electrode is not brought into contact with soft tissues, because of the high voltage required to overcome the increased resistance. The positive pole is applied, and the liquid bleaching solution is driven towards the pole of lower potential. The writer has observed that ionisation with hydrogen peroxide is sometimes more effective than cataphoresis; the ions are repelled from the negative pole and seem to have a more penetrating effect on the dentine. Hence it has been stated that when bleaching will not succeed with the positive electrode, by reversing the poles and applying the negative electrode, the desired effect can be brought about in a remarkable manner.

The current is also a valuable aid in bleaching with calcium hypochlorite ("bleaching powder"), from which chlorine is liberated to act chemically on the discolored matter in the tubules. The value of the current in this respect seems to depend on the electrolytic effect on the water in the dilute acetic acid. Chlorine has a great affinity for hydrogen, and will unite with the H_2 molecule of water, liberating O under ordinary circumstances. When electrolysis is employed in a mixture in which chlorine is being set free, the H_2 molecules combine with the chlorine to form hydrochloric acid; oxygen in its nascent form is liberated, and has great affinity for organic matter, uniting with it to change it into a translucent substance.—E. Sturridge.

PRACTICAL POINTS.

Synthetic Rubber.—The artificial production of rubber has for long loomed ahead as particularly fascinating to the increasing number of consumers outside of dentistry; but as the earliest experiments in the wonderful vulcanization process were mostly undertaken in connection with dental prosthetic work, and at first of comparative unimportance otherwise, the research will have at least a traditional or antiquarian interest for us. As a laboratory curiosity, "made" rubber, plain or "vulcanized," either hard or soft, by modifications of the process which promised to banish even the heat "vulcanizer" or "digester," has been known in very small, expensive quantities, but recent advances are very striking. In 1906 Professor Wyndham Dunstan, before the British Association, dealt with the transformation of the hydro-carbon isoprene, by polymerisation in contact with certain substances, into rubber possessing, it was said, all the

properties of the natural substance. Isoprene was obtained from oil of turpentine, the high cost of which put the method commercially out of court. But isoprene can also be made from butyl alcohol, which can be obtained from starch by fermentation.

Renewed interest has been excited by a paper lately read by Dr. W. H. Perkin before the Society of Chemical Industry. He described the process of making synthetic rubber, which he said might possibly be carried out at a cost of a shilling a pound. Dr. F. E. Matthews and Professor Carl Harries, of Kiel, both independently ascertained that isoprene left in contact with sodium was converted into solid rubber. Professor Harries was the first to publish his results, but Dr. Matthews was the first to make the observation. The action is catalytic, and appears to be continuous. There are also other methods of bringing about this change in isoprene.

What the reply of the planter (with his ever-increasing price for the precious product in dwindling supply) may be, should be both financially and technically interesting.—British Dental Journal.

Protecting Metal Plates During Vulcanizing.—When a base plate of aluminum or Watts metal, cast or swaged, is used in plate work, it may become tarnished by the sulphur escaping in vulcanizing, making it difficult to regain the lustre. This may be avoided by painting the exposed metal surfaces with shellac and greatly facilitate the polishing of the metal part.—M. L. Schmitz, D.D.S., Chicago, Ill., in Pacific Dental Gazette.

Removable Pin Teeth.—Removable pin teeth, especially molars and bicusps, may occasionally be used on metal dentures in place of soldered-on teeth. They have, however, one disadvantage: they must be removed in case the denture requires to be soldered in making repairs. They may stand fire, but the risk is great. If the teeth are long they may be held with gutta-percha instead of cement, and in that case are readily removed and replaced. Special care is needed to strongly solder the pins to the plate, using plenty of solder at the base of the pin, and seeing that it flows freely. They make a neat finish, have a natural feel to the tongue, require less labor and less material in construction, and are strong and cleanly. It must be borne in mind that they do not stiffen the plate as do the soldered backings of ordinary plate teeth, therefore the plate must be made stronger. Several makers present moulds much more natural in shape and character than are the moulds of plate teeth, and as there are now so few plate teeth used, the stock of dowel teeth is better kept up. Keeping the stock does not entail so much capital tied up in expensive platinum pins, therefore the stock is more likely to be kept well up to date and in good variety.—W. H. Trueman, in Dental Brief.

Casting Under Steam Pressure Developed in the Vulcanizer.

—One source of pressure which is available in every dental laboratory thus far seems to have been overlooked in regard to its application to the casting process, i.e., the steam pressure developed in the vulcanizer.

Any dentist who possesses a compressed-air casting outfit, by buying rubber "steam" tubing of suitable size and length, and attaching one end thereof to the escape pipe of the casting apparatus, will obtain better results from the steam pressure thus secured than from the use of compressed air.

The hot steam does not deprive the molten gold of as much heat as expanding air, and the manometer on the vulcanizer indicates the exact amount of pressure.—C. M. Torrance, D.D.S.

Rubber-Dam in Difficult Cases.—When the cavity is near the gum margin on the labial and buccal surfaces of the teeth, it is often difficult to apply the rubber-dam so as to keep the cavity dry. Apply the rubber-dam and secure it with ligatures down close to the gum margin of the tooth; then press both rubber and ligature down so as to expose all parts of the cavity, and hold it there until you dry the tooth with hot air; then bathe the tooth with alcohol, and when the alcohol has evaporated, the rubber will generally remain in place and the cavity can be filled without danger of moisture.—G. North, in Dental Summary.

To Tighten a Vulcanizer.—Ordinary newspaper is boiled for from five to ten minutes until it has become quite soft, and is pressed in this condition into the groove of the lid on the old leaky ring. The lid is then screwed on tightly. After the vulcanizer is used once, this paper mass is quite hard and tightens perfectly. Any excess of paper mass is cut off.—*Deutsche Zahnärztliche Wochenschrift*.

Our own method is as follows:—

We French-chalk the India-rubber packing, put the lid in position, turn down the centre-screw lightly—not tightly—upon it, and when the steam is up we give the centre-screw a further very slight tightening turn with the spanner.

By working in this way we never strain any part of the vulcanizer, the India-rubber packing is not injured and lasts for years.—**CLAUDIUS ASH, SONS & CO., Ltd.**

Polishing Metals.—Make a paste of 30 grams of ammonium carbonate dissolved in 120 grams of water and 480 grams of fine chalk. Spread this paste over the surface of the object to be polished, and rub with a soft flannel cloth first, then with a piece of chamois skin. If the metal surface has any pits or fissures, a

brush may be employed.—*Revue Trimestrielle Belge de Stomatologie*.

Fitting Inlays to Plates.—When from any cause an inlay does not fit, its cavo-surface is coated with a mixture of carborundum (180 mesh) in glycerine, the inlay held lightly in position with the fingers, while with a convenient plugger point in the mechanical or electric mallet, blows are so directed that the jarring of the inlay in the cavity grinds a perfect joint.—W. H. T. Collins, in *Garretsonian*.

To Harden Plaster.—To six parts of plaster one part of freshly slaked and well-sifted lime is added. When the model is dry it is saturated for two hours with a concentrated solution of zinc sulphate or iron sulphate. A model saturated with zinc sulphate remains white, while iron sulphate imparts to the model a greenish coloration which afterwards becomes blackish.—*Deutsche Zahnärztliche Wochenschrift*.

Oral Sepsis and Tetanus.—At an inquest on the body of a woman who died from tetanus at Southwark, it was given in medical evidence that the teeth were in a very bad state and the septic condition of the mouth might have been responsible for the entrance of the infection. There was a slight wound on the toe, but this had occurred within three days of the onset of symptoms, and was therefore probably not responsible for the disease. Dr. F. J. Waldo, the coroner, took the occasion to warn the public on the dangers of neglecting the proper care of the teeth.—*Lancet*.

Repairing Vulcanite Dentures.—A perfect union can be obtained between old and new rubber, even if the surface of the old rubber is highly polished, by the following simple method:—Without cutting the usual dovetails for retention, the surfaces to which new rubber is to be attached are covered with a thin coat of crude petroleum. The case is flaked in the ordinary way, pressed and vulcanized, when perfect and inseparable union between the two layers of rubber will be found to have taken place. This process is of value in many cases of repair work, in strengthening a weak or thin plate, in adding supplemental portions to a plate, dry packing, etc.—C. W. F. Holbrook, in *Dental Scrap-Book*.

YEN-OR

ZINC CHLORIDE
FORMALDEHYDE
CHLORPHENOL

A PULP-CANAL FILLING AND TOOTH DRESSING

Antiseptic. Anti-putrefactive. Dessicant.
Penetrative. Germicidal.



Yen-or is a carefully prepared Germicide of great value in Dental Practice. Made from the prescription of a qualified Dental Surgeon who has made pulp treatment a special study for over twenty-five years. This preparation has been used by him very successfully for several years.

YEN-OR (*Continued*)**Advantages:—**

Always ready for use.

Easily introduced into pulp-canals.

And in canals not easy of access.

Easily removed.

Has no irritant action.

Does not discolor the teeth.

Small remnants of living or devitalized pulp are rendered harmless.

Penetrates deeply into infected or softened structure.

And rapidly destroys bacteria, so is useful for dressings also.

It keeps well in collapsible tubes of pure tin.

**Method of using:—**

It can be conveyed into the pulp-canals on a smooth probe or bristle followed by a gutta-percha point, or introduced on very small pieces of bibulous paper.

A good method is as follows:—

Bibulous paper is torn into strips about half an inch wide and four inches long; they are best kept in a wide mouth stoppered bottle—containing a few crystals of thymol—ready for use.

YEN-OR *(Continued)*

To fill a pulp-chamber:—

Squeeze out a little Yen-or paste from the tube on to a mixing slab; take a strip of the bibulous paper from the bottle, lay the end on the slab, and with a spatula smear the end of the paper with the paste; then scrape off small pieces of the paper, and lay on the slab, side by side, enough to fill the canals. These small pieces are easily conveyed into the canals with a fine smooth probe with a blunt end.

When the pulp-chamber is full, take up any excess of paste with a pellet of bibulous paper, then seal with a pellet of cotton and mastic while the material is being prepared to complete the filling of the cavity.



As a dressing:—

A small piece of bibulous paper treated in the same way may be laid as a dressing over the sensitive area in tender teeth, under a filling. Any cavity may be wiped out with Yen-or with advantage, especially where it is difficult to remove all the softened dentine.

Supplied in Collapsible Tubes, - Each \$1.80.

SOLE AGENTS:

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A Popular Priced Wax

IS IN GREAT DEMAND

The large sale for our ENGLISH WAXES bears testimony to their great value.

No. 3, Pink	-	-	-	per lb.	.75
" 2, "	-	-	-	"	.80
" 1, "	-	-	-	"	.90
Brown for Base	-	-		"	.85
Extra Tough Pink	-	-		"	1.00
" " "		-		"	1.25
" " Yellow		-		"	1.00
Black for Inlays in fine sticks, per box					.35

SEND US THAT MAIL ORDER

Claudius Ash, Sons & Co., Limited

TRIKRESOL-FORMALIN

SOLUTION AND PASTE

(DR. J. P. BUCKLEY'S Formula.)

DIRECTIONS FOR USE.

1.—In Teeth with Gangrenous Pulps, open up the cavity and clear out the canal or canals. Soak one or more cotton pellets in the Trikresol-Formalin Solution, insert in the canal or canals, and securely seal the cavity with Fletcher's Artificial Dentine to make it perfectly air-tight.

After one or two days remove the cotton pellets, wash out the canal or canals and cavity with a 3 per cent. solution of Carbolic Acid, and then thoroughly clean and dry out.

Now flow a drop of the Trikresol-Formalin Solution in the canal, or in each canal if more than one, fill the canal or canals with Trikresol-Formalin Paste, and proceed with and complete the permanent filling.

2.—Trouble subsequent to Root Treatment. When inflammation with swelling and pain develops in teeth, the roots of which have been long previously treated, and trephining has to be resorted to, they should be left open under Trikresol-Formalin Dressings for a few days; the treatment described above, under No. 1, can then be completed in two sittings.

3.—Pulp Amputation and Nerve Extraction. In cases of pulp amputation and nerve extraction insert in the canal a cotton pellet soaked in Trikresol-Formalin Solution, seal air-tight with Fletcher's Artificial Dentine, leave for a few days, then remove, flow a drop of Trikresol-Formalin Solution in the canal, fill it up with Trikresol-Formalin Paste, and insert the permanent filling upon it.

4.—Gangrenous Pulp and Fistula. Should a gangrenous pulp be accompanied with a fistula, Dr. Buckley opens the fistula, drains off the pus, inserts cotton pellets soaked in Trikresol-Formalin Solution and seals perfectly air-tight with Fletcher's Artificial Dentine. If necessary the treatment is repeated several times. The final stages of the work are carried out as described above under No. 1.

The most successful results are obtained when the above directions are faithfully followed.

Large package.....\$1.25 per box.



ASH'S INLAY AND CROWN CEMENT

GREATLY IMPROVED

(Oxyphosphate of Zinc.)

Features—Extra Tenacious; Extremely Dense; Very Durable; Non-Expanding; Highly Resistant to the Fluids of the Mouth.

One of the wants experienced by the Inlay and Crown worker is a reliable and enduring cement, which can be depended upon to retain Inlays and Crowns in position for an indefinite time.

Ash's Inlay and Crown Cement meets the need, and possesses all the features enumerated above. The powder is very finely ground, it is easily mixed with the liquid, and forms a cement which practically does not expand during crystallization. It is thus free from an objection which is present in most oxyphosphate cements that are used for setting Inlays and Crowns, viz., expanding during crystallization, with the result that the bite is raised in the case of a Crown and the fit is disturbed in the case of an Inlay.

Directions for Use.

Put a small quantity of the Liquid on a clean glass slab, place enough Powder near it, but not in it, mix the two together by drawing a little Powder at a time into the Liquid with a spatula, until it is of the consistency of milk. In this condition it is suitable for setting an Inlay. (The Inlay should be smeared with a camel hair pencil dipped in the Cement, and then the cavity should also be smeared so as to obtain the junction of cement with cement.) For setting Crowns, the Cement should be mixed to the consistency of putty.

Supplied in the following shades:—

White, Pale Yellow, Yellow, Pearl Grey.

One-shade packet, any shade per packet \$1.25 6 pks. for \$ 6.00
Four-shade packet per packet 3.00 6 pks. for 15.00

NOVOCAIN

FOR THE

Painless Extraction of Teeth

**One of the Safest and Most Powerful
of Local Anaesthetics**

**ABSOLUTELY NON-IRRITANT
SCIENTIFICALLY PREPARED
UNATTENDED BY AFTER-EFFECTS**

TABLETS.—NOVOCAIN IS PREPARED IN
TABLET FORM—KNOWN AS

Dental Novocain-Suprarenin Tablets

Put up in Tubes, 20 Tablets in each Tube
Per Tube - - 50 Cents

These Tablets yield uniformly excellent results; a fresh reliable solution can at all times be made from them; and they are giving the greatest satisfaction to all Dentists who are using them.

Claudius Ash, Sons & Co., Limited

STOVAINE

(Registered).

AN IDEAL ANÆSTHETIC FOR USE IN SURGICAL AND
DENTAL PRACTICE.

Guaranteed not to contain Cocaine.

Do not fail to try it.

STOVAINE is pure Chlorhydrate of Amyleine. It is administered hypodermically like cocaine; its anaesthetic action is equal to that of cocaine; it is much less toxic than cocaine; it exerts a tonic action on the heart; in a word, it possesses all the advantages of cocaine without any of its dangers.

STOVAINE has a wide range of application, and is being very extensively used by surgeons and dentists all over Europe and in the United States and Canada with the greatest success and satisfaction.

The most convenient and popular form in which Stovaine is put up is a 1 per cent. Solution in Oil of Eucalyptus, Oil of Wintergreen, Boric Acid, Glycerine, Tincture of Rosemary, Thymol, Oil of Peppermint, Benzoic Acid, Carolic Acid .05 per cent., and Alcohol.

Price, in 2-oz. bottles.....per bottle \$1.25

NOTE.—To obtain the best results with Stovaine, it is necessary TO KEEP STRICTLY TO THE TIME recommended by the manufacturers, viz., TWO minutes after injection. When the Operator has finished injecting, he should look at his watch, and as soon as TWO MINUTES have elapsed he should at once proceed with the extraction of the tooth or teeth.

Claudius Ash, Sons & Co., Limited

BORITH

An excellent preparation to recommend your patients for cleansing Dentures. It is a thoroughly reliable preparation.

Price . . . \$2.00 Dozen

ZIMO

The best obtundent on the market for the painless extraction of teeth and minor surgery; Antiseptic and Germicidal. Can be used in all cases; safe and effectual. No bad after effects. Once used, always used. "ZIMO is a great practice builder," as everyone says who has used it. 4 oz. bottle, \$1.00; 6 bottles, \$5.00. Every bottle guaranteed. Try a bottle; if not all right send it back and get your money.

Manufactured and put up by

DR. S. T. WHITNEY

ST. STEPHEN, N.B. . . . CANADA

General Agents:

CLAUDIUS ASH, SONS & CO., Limited

11-13 Grenville Street, Toronto, Ont.

Ash's Globe Copper Amalgam

(From the formula of Profs. W. D. Miller and Jung.)

Alloyed with $2\frac{1}{2}$ per cent. of Tin. Recommended for colour, setting properties, and hardness.

This amalgam of Copper and Tin is the outcome of many experiments on the part of the above-mentioned eminent Professors Miller and Jung.

Price.....per oz. \$1.00

In 6-oz. lots.....per lot 5.00

At the time of its introduction Professor Miller in an exhaustive paper describing the experiments (Cor. Blatt., Apr., '94), said that the addition of tin in these proportions, viz., $2\frac{1}{2}$ to 3%, was clearly proved to have the effect of lessening the chemical dissolution of the copper in the fluids of the mouth. Further, that it favourably affected the colour of the fillings, which remained grey in contrast to the black of the copper amalgams without tin. Extensive experiments for detection of shrinkage were carried out, and we have evidence from Germany, where it has been largely used since 1893, to show that in actual practice the conclusions drawn from the experiments as to its value as a filling material have been confirmed.

DIRECTIONS FOR USE.

Heat the Amalgam in a ladle until beads of mercury ooze out, crush it thoroughly in a mortar, knead well together in the hands, and use at once.

The Mosley Angle Holder

A New Instrument—One That YOU Need

THIS Angle Holder is equipped with five different instrument points that have been selected as the most useful for operations in the more inaccessible cavities.

Chisel, Burnisher, Approximal Blade, Broach Holder and Orthodontia Wrench

The holder is a positive locking device allowing the different instruments to be held at various angles and twists. The principle involved is a great advance over the old ball and socket fixture and ensures rigidity of the point.



The attachment for holding broaches and cleansers is the most positive of all holders, and allows of any length broach being used. Cut off the broach to the required length, being sure that enough of the shaft remains after it has been inserted in the attachment to engage with inside bottom of the screw socket. To remove, simply force the broach backwards through the attachment.

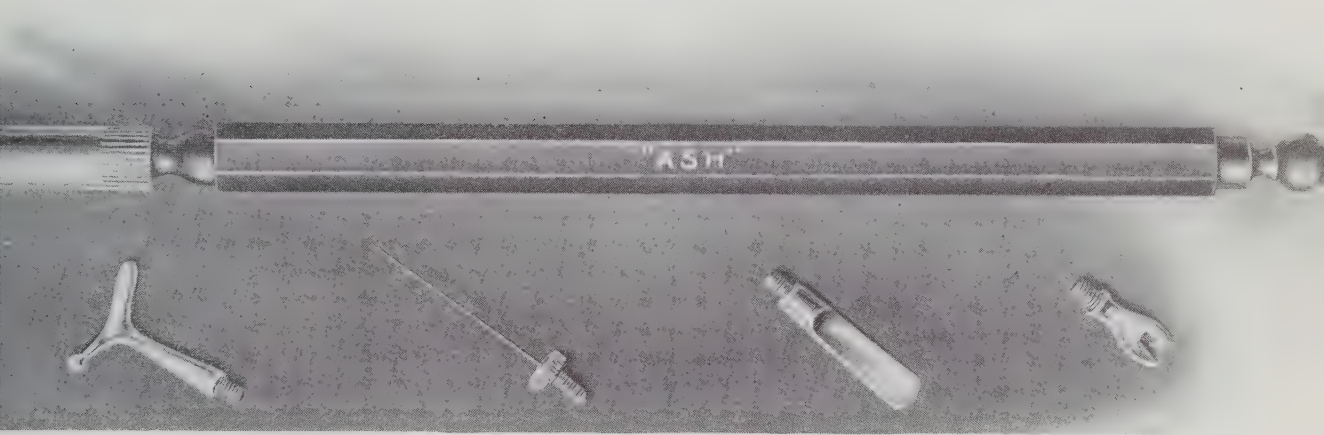
For Further Description see Opposite Page

The Chisel will be found most useful in operations on all posterior teeth, and is invaluable in preparing cavities for inlays in the distal surfaces of the bicuspid and molar region, heretofore inaccessible except with a burring instrument.

The thin approximal blade will commend itself to all practitioners for shaping up the wax form in the cavity and as an assistant in removing it, as well as being useful for burnishing plastic fillings.

The double headed burnisher and approximal instrument is almost indispensable for all plastic operations

The Orthodontia Wrench will be found invaluable to all those who practice the regulation of teeth. It allows the operator to adjust the regulating nuts, no matter at what angle they may be at.



In neat Cardboard Box \$3.75 complete

Direct or through your Dealer

Claudius Ash, Sons & Co., Limited

Every Dentist is Interested

In anything that will save him both time and money. So we want to introduce the HEATLESS DENTAL WHEEL. It is absolutely the best stone in the world.

The HEATLESS DENTAL WHEEL is a hundred per cent. better than any other in the world.

It does not heat or discolour the tooth—the patient suffers less pain and hardly any discomfort when you use a HEATLESS WHEEL.

It does not clot or become glazed when in contact with blood or amalgam.

It runs commercially true—absolutely. It does its work with exactness and fidelity until it is ground down to the very edge of its metal hub.

You save all of ten minutes every time you prepare a tooth—and its cuttings are of a uniform symmetry and excellence from beginning to end.

It is the most rapid working and most satisfactory wheel on the market.

It costs less and cuts faster and better than any other wheel made.

GUARANTEE.—A new wheel free for any Heatless Wheel that does not prove perfect.

Try it out, Doctor, and if you do not say that from every point of view it is the very best stone you have used you will be a distinguished exception.

Made in flat wheels, 5 diameters, 3 thicknesses and one grit.

Price 10c. Each, \$1.00 Dozen. Direct or through your dealer

Claudius Ash, Sons & Co., Limited

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TORONTO

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FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350

FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -

FOR SALE—Toronto City Practice. Apply Ash & Sons 400

WANTED—Graduate Assistant. Toronto City. Apply Ash & Sons
 “ I Campbell Celluloid Press. State price and condition

SECOND-HAND GOODS

I S.S.W. Pattern Chair, Leg Base	- - - - -	-\$ 30
I Case Harvard Chair	- - - - -	20
I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new	- - - - -	60
I Davis Gasometer, less Face Piece and Tubing, excellent condition	- - - - -	18
I Wetherby Suction Machine (new style), in A-1 condition		25
I Davis Gasometer		
I Mills Centrifugal Casting Outfit	} - - - - -	25
I Olivian Swager		
I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler	- - - - -	12
I S.S.W. Leg Base Oil Chair	} - - - - -	75
I Golden Oak Clark Cabinet		
I S.S.W. Metal Fountain Cuspidor		
I Leighton-Jackes Switch Board. Onyx Face and Shelf. Nearly new. Perfect condition. 110 Volts. 60 Cycles alternating Price including Electro Dental H.A. Syringe		100
I Golden Oak Clark Cabinet	- - - - -	25
I Large G. O. Cabinet. A-1 condition. A bargain	- - - - -	60
shape - - - - -	- - - - -	55
I Ash Britannia Chair. Leather upholstery. A-1 mechanism		100

Claudius Ash, Sons & Co., Limited



WHERE there is much exhaustion and persistent nausea after anaesthesia, **HORLICK'S MALTED MILK**, taken hot affords prompt relief, with no unpleasant results following its administration.

A thorough test invited. Samples for professional and office use will be supplied free of expense, upon request.

Horlick's Malted Milk Company

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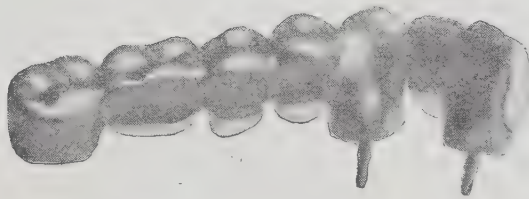
Specialist in Crown, Bridge and
Metal Work Exclusively

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Modern
Porcelain Bridgework



BETTER THAN
Old-Fashioned
Conspicuous
Gold Bridgework



send us your name and address and we
will show you how Porcelain Bridgework
can be made more easily than the gold.

Ask for "The Easy Way" Book.

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WILLIAMS MAT GOLD

This gold is the highest class product of its kind manufactured. It is the standard by which all mat golds are compared.

It costs a few cents more per filling than the foil gold, but you have quality, purity, cohesiveness, adaptability and easy manipulation to offset that extra few cents.

TANTALUM BURNISHERS

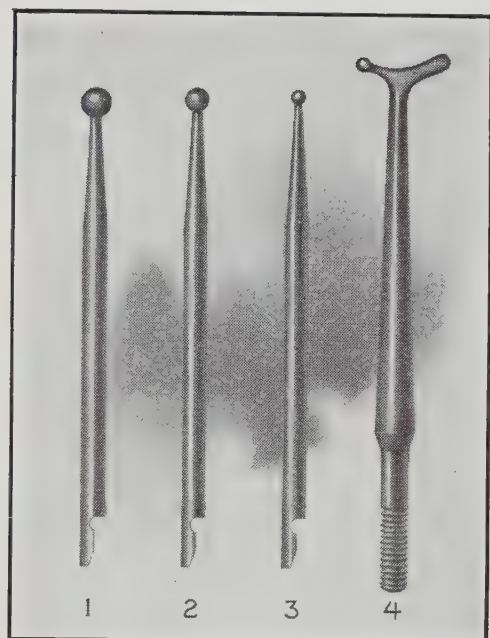
THE REAL NEW THING for gold fillings. The way you can burnish in WILLIAMS MAT GOLD with the tantalum engine burnisher is simply marvellous.

Tantalum is more valuable than gold and can be sterilized in an acid solution that would dissolve gold or platinum.

PRICE

Engine Burnishers	\$3.00 each
Cone Socket Burnishers	5.50 "

FOR SALE AT ALL DENTAL DEPOTS



CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

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DURING THE PAST 54 YEARS

the firm of Johnson & Lund has devoted its best energies to the making of Teeth. Experts in the Art have been busy during this half century experimenting and testing along every branch of the science, with the result that in 1913 Johnson & Lund offer to the Profession the most Perfect Tooth—Strongest Porcelain, Faultless Pin and Best workmanship, Complete Assortment of Molds, the World's Largest Selection of Shades.

—ALL THESE ARE COMBINED IN—
K A Z A N
THE TOOTH OF SERVICE AT YOUR SERVICE

Tell Your Laboratory to use KAZAN

The experience of thousands of Dentists the world over proves that the full-sized, strong, tough Kazan pin offers the maximum of service that can be obtained in an artificial tooth. The men who use Kazan are coining the big profits of Satisfaction from the mint of Experience.

Tell your Dental Depot to Send KAZAN

Claudius Ash, Sons & Co., Limited

BEAR THIS IN MIND

That any cement which possesses the qualities essential in the two different branches of dentistry—operative and prosthetic, is a cement worth a trial by every dentist in the country.

LITHOS as a general filling material, is smoother working, more hydraulic, denser, thereby giving it longer life, more adhesive and with 25 % greater crushing strength.

LITHOS for setting crowns, bridges and inlays, is stronger, more plastic, more adhesive and cooler than any other oxyphosphate of zinc cement ever used before.

LITHOS GIVES YOU TWO ADVANTAGES:

It enables you to serve your patients better.

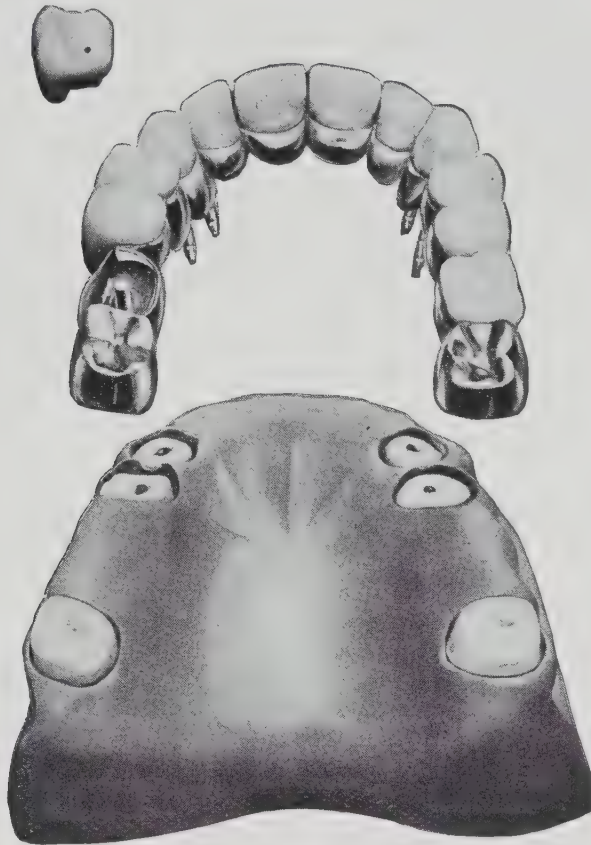
It enables you to use one cement for both purposes.

It saves money for you in the long run.

Order a box through your dealer and be convinced

LEE S. SMITH & SON CO.
PITTSBURGH, PA.

Try the New DENTAL LABORATORY For Expert Mechanical Work



Cuts Illustrate our Goslee Bridge-work

Cast Aluminum Plates
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Crown and Bridgework
Goslee, Steeles, Dimelow

Gilmore Attachments
Roach, Bennet Bar
Morgan Attachments
Semi-Removeable Bridges
Bar Lowers
High Class Vulcanite Work

ALLEN & ROLLASTON

DENTAL LABORATORY

(Late of C. L. Daly)

Room 32

2 College Street Toronto

Caulk's White Copper A Winner

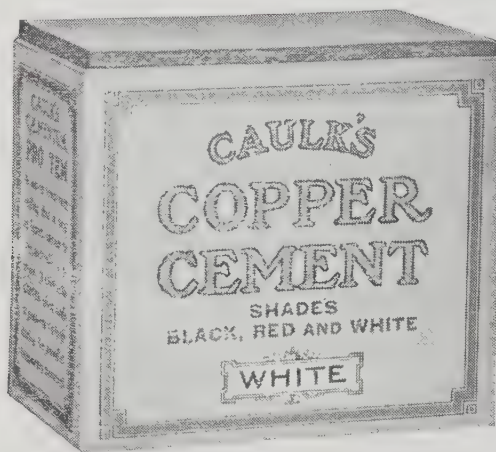
We have unquestionably made the most elaborate investigation of copper as applied to dental cements of any firm or individual in the world.

Our problem was to get into one cement the maximum of copper virtues and the minimum of its faults.

CAULK'S WHITE COPPER CEMENT is the result.

It is the happiest combination possible of copper and zinc, with the virtues of both.

Our work has been through chemistry into bacteriology, in which we have determined that a percentage of copper in a cement, properly prepared and introduced, gives the full bacteriological effect of one that is all copper, with the nastiness and unsightliness eliminated.



We have given the profession a cement that is practically **white**—which shade it retains in the mouth in most instances—a cement that has as pronounced sedative and germicidal effects as one that is practically all copper.

The profession has responded so enthusiastically that with our vast equipment we have difficulty in filling orders promptly.

Thank you, gentlemen.

THE L. D. CAULK COMPANY

Canadian Branch—70 Bond Street, - TORONTO

Esthetic Dentistry

is now possible. It means that teeth when restored shall not only be saved but shall **look like** teeth.

That sort of dentistry being possible, it is becoming generally known to the people, and being generally known, is required—very properly so.

DE TREY'S SYNTHETIC PORCELAIN has made that character of dentistry possible; it is transforming a great branch of dental art.

It enables you to match a tooth **absolutely**, not merely approximately. With a little care it makes a permanent filling.

This is the kind of dentistry that is worth while and ought to appeal to every dentist's professional pride, and point the way to a practice with proper regards.

We would appreciate a letter from you, that you may get started right.

THE L. D. CAULK COMPANY

Laboratories: MILFORD, DELAWARE

Canadian Branch—70 Bond Street - - TORONTO

Specialists in removable and semi-removable bridge work.

Griswold, Morgan, Roach Bennett Bar, Fossum semi-removable and Gilmore attachments

Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

Ash's Swaged Vulcanite Dentures, Bar Lowers, etc.

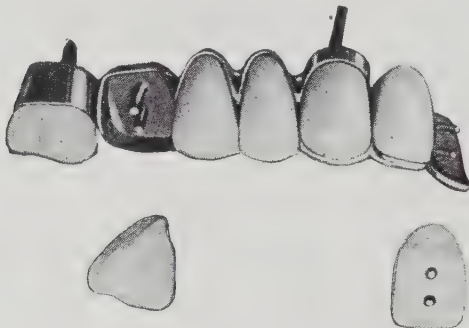
Chas. L. Daly

X. L. C. R. Dental Laboratory

ROOMS, 1, 2, 3, 4 @ 5,
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"Your impression **OF** me will largely depend upon your impression **TO** me."— C. L. Daly.

"Send good Plaster Impressions and correct wax bite and leave the rest to me."— C. L. Daly



The above cut illustrates the Dimelow Detachable Facings at \$2.75 per Tooth, all porcelain posteriors

PARTIAL PRICE LIST FOR LABORATORY WORK:

Gold Crowns : Cen. Lat. Cus.
and Bic. - - - \$2.00
Molars - - - \$2.25 to \$2.50

Bridgework : Anteriors per tooth \$2.00
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Richmonds, extra - - - \$.25

Facings charged extra at market price.

Steeles and Dimelow interchangeable Facing and Porcelain

Cusp. posteriors, per tooth \$2.75

Richmonds, extra - - - .25

Gold Cusps on posteriors extra .50

Facings included in above prices

Goslee and Dowel Bridgework
per tooth - - - 3.00

Teeth extra

Gold Inlays

(Send wax impression packed in tissue paper)

Casting only - - - .75

Gold - - - .05 per gr.

Rubber Dentures—

Plate Work, \$2.50 to \$3.00

(Partials \$2 00)

Swaging metal plates (swaging

only) Aluminium - - - \$3.00

Gold - - - \$5.00

Casting Aluminium plates

(cast only) - - - \$4.00

Gold Plates - - - \$6.00

All teeth charged extra at market price

Send impressions (unpoured) plaster preferred, for all classes of work including metal work.

SEND A TRIAL ORDER.

SATISFACTION GUARANTEED

When you write, give full particulars of case and when wanted.

You will not be disappointed.

CHARLES L. DALY

THE MEASURE OF VALUE

demanding in a dependable

Oral Prophylactic is exactly provided in **Pyorrhocide**

BECAUSE Pyorrhocide removes daily deposits of salivary calculus that contribute to the formation of tartar, the breeding place of the bacteria of caries.

BECAUSE Pyorrhocide naturally stimulates blood circulation in the gum tissues—strengthens—revitalizes those tissues to more effective resistance to germ infection and multiplication.

BECAUSE Pyorrhocide neutralizes offensive breath-fetor and promotes the antiseptics desirable in operating.

BECAUSE Pyorrhocide, by preserving in health the tissues surrounding the roots, insures permanent abutments for restorations.

BECAUSE Pyorrhocide, from its original, scientific combination of constituents, is a vitally important part of the consistently successful Dentinol and Pyorrhocide Method of preventing and treating pyorrhea.

BECAUSE Pyorrhocide is economical to the patient, a \$1.00 can outlast the quantity of ordinary pastes and powders obtainable for the same amount.

BECAUSE Pyorrhocide produces results that insure satisfied, appreciative patients, and, therefore, a constantly increasing clientele and enhanced professional reputation.

Pyorrhocide may be prescribed through druggists and can be procured by dentists at quantity rates through dental supply houses.

"The Practical Method of Successfully Treating Pyorrhea" has been mailed to every dentist in the United States and Canada. If you have not received a copy of this original, interesting booklet, it is yours for the asking. Let us also send you, free of charge, "Pyorrhea, Its Causes, Effects, Treatment and Prevention," scientifically exact and invaluable for the detailed information it supplies on the subject.

The Dentinol & Pyorrhocide Co.

World's Tower Building

110-112 West 40th Street

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Unless You Have Set-Up a Denture WITH Justi True-to-Nature Teeth

Anteriors

Posteriors

you cannot realize the advantage of selecting for your cases, teeth that are properly designed to fulfil all the requirements, which might be made of them, in regard to the several methods of Articulation.

True-to-Nature teeth, combining as they do—the Natural and Mechanical principles—which are so necessary to correct Articulation, have been received by the Dental Profession (regardless of theories) as the Ideal tooth for Vulcanite work.

If YOU have a theory or method order a set from your Dealer—place them upon your articulator—and become convinced.

May we send you a booklet of molds which also tells you how to save time setting-up a case.

H. D. JUSTI & SON

Philadelphia

Chicago

Are you satisfied that the Alloy fillings you are now putting in are the best that can be made? We are sure they are not unless you are using



Absolutely no contraction
One 20000 of an inch expansion
Greatest edge strength known

Ask Your Dealer



The New Model No. 40—\$40

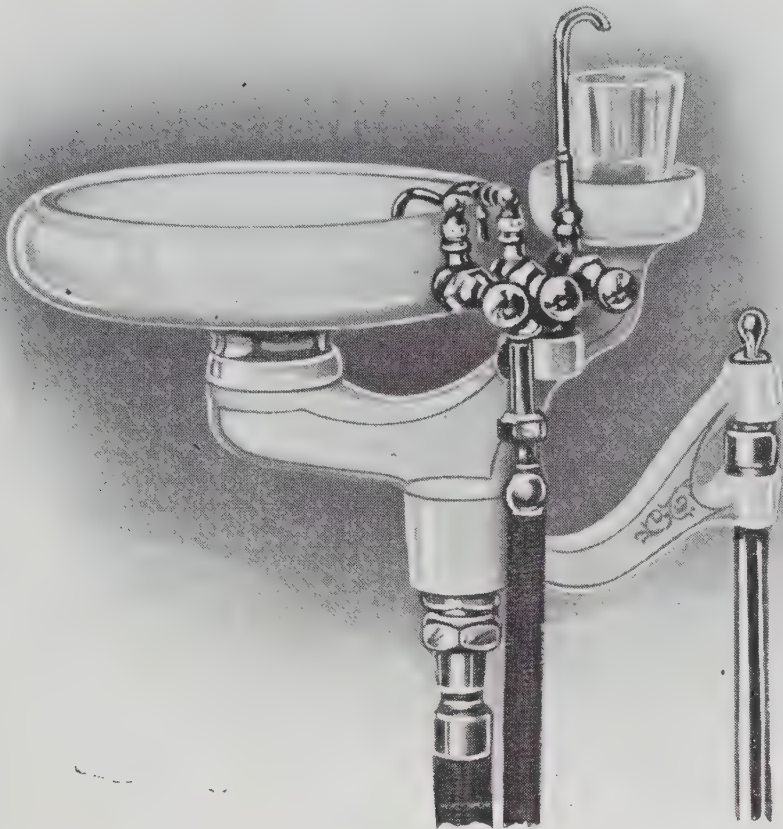
The WEBER New Model is the most infringed upon, and imitated Fountain Spittoon on the market.

This is true recognition of its Superiority and Leadership.

Why buy the copy, when the original does not cost you any more, and is guaranteed to please or money refunded.

The Weber Dental Mfg. Co.
CANTON, OHIO, U.S.A.

1914 Clark \$40 Single



THE GREATEST SPITTOON VALUE EVER ACHIEVED
COMPLETE FOR \$40.00

LEAD BLOWN BOWLS in all colors.

Write us to learn of the special features.

We have spittoons of many models, ranging from the REASONABLE price of \$25.00 up to a style REASONABLE at \$65.00.

A. C. CLARK & CO.

Grand Crossing

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A Dentist of Geneva, N.Y., writes us:—

"Eighteen or twenty years ago, I bought one of your Fountain Spittoons. It needs nickel plating. What would you charge to attend to it?"

THE J. M. NEY COMPANY, Hartford, Conn., U.S.A.

NEY'S GOLD DISCS.

Any Gauge Nos. 14, 15, 16, 17, 18, 19.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
20K Dark or Light.....	\$0.98 dwt.	\$0.93 dwt.	\$0.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.

NEY'S GOLD NUGGETS.

In 1, 1½, 2 and 5 dwts.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
16K Dark or Light.....	\$0.86 dwt.	\$0.81 dwt.	\$0.78 dwt.
18K Dark or Light.....	.90 dwt.	.85 dwt.	.83 dwt.
20K Dark or Light.....	.98 dwt.	.93 dwt.	.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.
Far Superior Non-Shrinkable.....	1.35 dwt.	1.30 dwt.	1.25 dwt.

NEY'S GOLD PLATE.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
10K Dark or Light.....	\$0.58 dwt.	\$0.53 dwt.	\$0.51 dwt.
12K Dark or Light.....	.66 dwt.	.61 dwt.	.59 dwt.
14K Dark or Light.....	.75 dwt.	.70 dwt.	.69 dwt.
16K Dark or Light.....	.85 dwt.	.80 dwt.	.79 dwt.
18K Dark or Light.....	.89 dwt.	.84 dwt.	.83 dwt.
20K Dark or Light.....	.97 dwt.	.92 dwt.	.91 dwt.
21K Dark or Light.....	1.03 dwt.	.98 dwt.	.97 dwt.
Coin	1.04 dwt.	.99 dwt.	.98 dwt.
22K Dark or Light.....	1.05 dwt.	1.00 dwt.	.99 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.14 dwt.	1.09 dwt.	1.08 dwt.
Clasp Plate	1.30 dwt.	1.25 dwt.	1.20 dwt.
Green Gold for backing.....	1.03 dwt.	.98 dwt.	.95 dwt.
Virgin	1.35 dwt.	1.30 dwt.	1.25 dwt.
24K Matrix (.003 thick).....	1.20 dwt.	1.15 dwt.	1.12 dwt.

Crown metal, Gold on one side, Platinum on the other.

PRICES FLUCTUATE.

The above Gold Plates furnished in sheet or put up in envelopes. Plates cut to pattern, slight additional charge.

The above quantity rates may be allowed on 20 dwt. and 100 dwt. assorted lots, each item being charged at its respective rate.

THE J. M. NEY COMPANY

Established 1812

Main Office and Factory:

HARTFORD, CONN., U. S. A.

And Dealers in all Principal Cities



Sanodent

(Registered)

A Superior Root Dressing

FROM THE FORMULA OF
MR. C. R. FITCH, L.D.S., Eng.

Sanodent has been regularly used and well tested for nearly four years with the most satisfactory results, hence it is offered to the Profession as a
Thoroughly Reliable Preparation

DIRECTIONS FOR USE

AS A DRESSING FOR SEPTIC OR ABSCESSSED TEETH.—Thoroughly clean out the contents of the Pulp Chamber and Root Canals in the usual manner. Mix the Sanodent Powder and Liquid to the consistency of thick cream and apply on Cotton Wool to the Root Canals and Pulp Chamber. Repeat these dressings until the tooth is perfectly "sweet." Then permanently fill the Canals with either Asbestos Fibre, Gutta Percha Points, or Cotton-Wool covered with Sanodent mixed to a fairly thick paste.

In very septic teeth, which at the time of treatment are not abscessed, it is advisable at the first to clear out the contents of the Pulp Chamber only, apply a dressing of Sanodent, and leave the treatment of the Canals until a subsequent visit, when their contents will be far less septic.

SOME OTHER USES.—In those cases in which for some reason or other (*e.g.*, Tortuous Canals), it is impossible to clear out the Canals thoroughly, cover the orifices of these Canals with Sanodent mixed to a paste, and carried to place on Asbestos Fibre or Cotton Wool. Any remaining Pulp will be preserved in an antiseptic condition.

As a "Mummifying" agent, those who practice "Mummification of the Pulp" will find Sanodent excellent. Subsequent to devitalising and removing the coronal portion of the Pulp, apply Sanodent, mixed to a paste, on either Asbestos Fibre or Cotton Wool.

After the application of Arsenic, a dressing of Sanodent left on for a day, prior to attempting the removal of the Pulp, will render the pulp tough and thus admit of its being much more easily removed whole from the Canals.

Sanodent is very useful as a permanent Root-Canal Filling when it is mixed to a paste and used in conjunction with Asbestos Fibre, Gutta Percha Points, or Cotton-Wool.

N.B.—Do not force Sanodent through Apical Foramina, and do not seal it in contract with living tissue, either pulp or gum. Sanodent is not intended to replace proper Root Treatment, but to aid it.

Sanodent is supplied in stoppered bottles. The bottles should be kept well closed when they are not in use. After exposure to light and air the liquid becomes somewhat darker in color than as supplied, but this is no detriment to it, and in no way affects its efficacy.

Sanodent Powder and Liquid in Packets, per packet..... \$1.25

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NOW READY!!!



Ash's Appointment Book for 1914

Extra Strongly Bound in Red Leatherette, with Padded Front Cover, Gilt Lettered with the words "Appointment Book." Size $8\frac{1}{4}$ x $8\frac{1}{4}$ inches.

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| 313 Pages arranged for Half-hour Appointments from 8 a.m. to 8 p.m. | A copious Index ruled for use as an Address Book and Index to Appointments. |
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CANADIAN BRANCH,

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LONDON, W. ENGLAND.



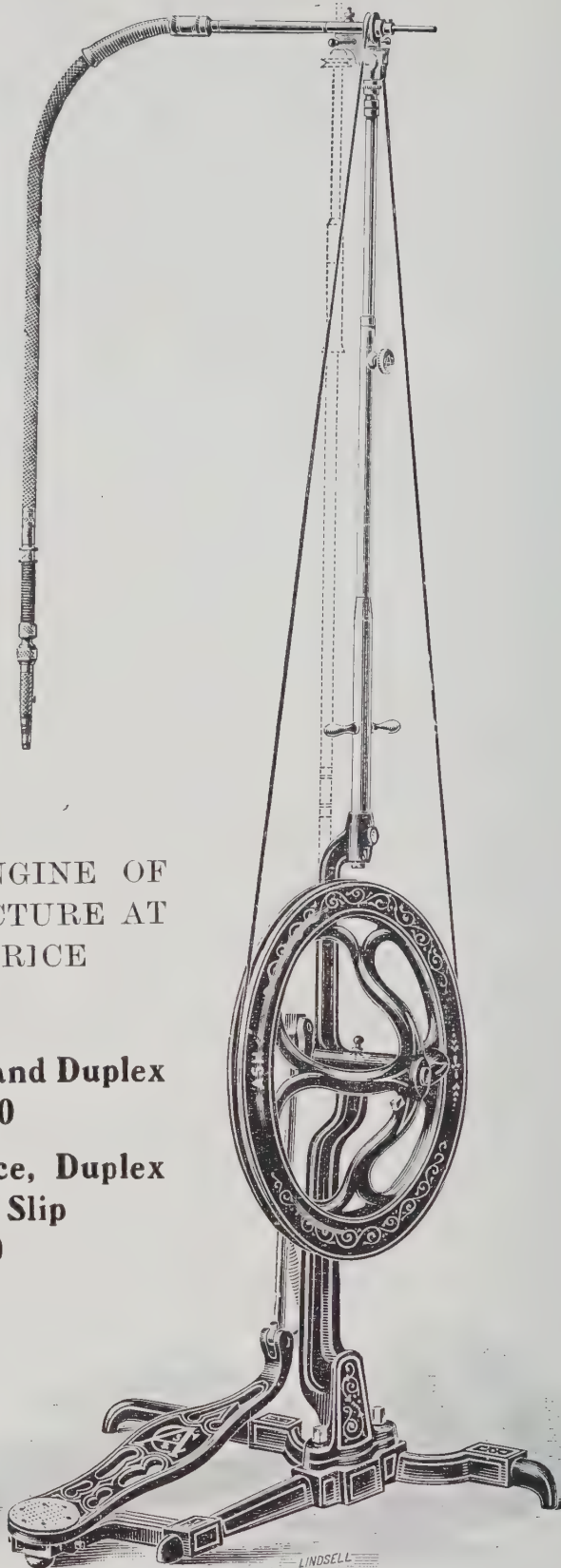
Ash's C Style Foot Engine



A GUARANTEED ENGINE OF
OUR OWN MANUFACTURE AT
A MODERATE PRICE

With No. 7 Hand Piece and Duplex
Spring, \$23.50

With No. 7 Hand Piece, Duplex
Spring and No. 2 Slip
Joint, \$28.50



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'Tis a saying of Demosthenes,
that the beginning of all virtues
is consultation and deliberation,
the end and perfection con-
stancy ❧ ❧ ❧ ❧ ❧



Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, FEBRUARY 1, 1914

No. 5

DENTAL RADIOGRAPHY FROM A BUSINESS STANDPOINT.

By HOWARD R. RAPER, D.D.S., INDIANAPOLIS

Professor of Radiography, Indiana Dental College.

The following remarks are addressed particularly to young men just starting in the practice of dentistry and to the older men who are not wholly satisfied with the size and class of their clientèle.

To arouse your combative argumentative tendencies I shall make a statement which, on the face of it, seems foolish. Then I shall try to show you that the statement is not foolish at all, but based on sound business sense. The statement: If I were a young man just starting into the practice of dentistry I would buy an X-ray outfit if I had to do without a casting machine and a vulcanizer to pay for it. Or if I were engaged in the practice of dentistry and did not have as large or as lucrative a practice as I thought I should have, I would buy an X-ray outfit if I had to mortgage my office to do it. I trust the remarks seem foolish enough for the most critical.

Now to defend myself. The first question which arises is: Does the X-ray picture enable us to give our patients better service? Unless this question can be truthfully answered in the affirmative we should give the matter no further consideration. This is a business talk pure and simple, and I shall therefore not enter into a wordy discussion of the value of the radiograph in the practice of modern dentistry. Suffice to say that those who have read my work on "The Uses of the Radiograph in Dentistry" unanimously agree that the radiograph is of value, not only in the exceptional, the unusual cases, but in the ordinary, the every-day cases. Without attempting to blunt my readers' reason by stirring up a keen enthusiasm, I have shown, by citing over sixty uses of the radiograph in dentistry, that if we wish to render the best dental service, or in many instances even passably good service, we must use radiographs. So let this fact be fixed in our minds: The X-ray picture is a practical, and many times an invaluable, aid in our work.

The slogan of the "Dental Digest" cannot be repeated too often: "As a service to the people dentistry is a profession, as a means of livelihood it is a business."

Dr. Capable Young Man, a recent graduate of college, has just set up in business—i.e., opened a dental office—in the town of, let us say, anywhere from one to fifty thousand inhabitants. He has some knowledge, skill, and time he wishes to sell. If a man has something to sell, prospective buyers must know about it, or his chances to make a sale are mighty slim. Advertising is simply attracting attention. If Dr. Capable Young Man is not ethical he uses a lot of printer's ink and, in all instances that I have observed, makes many wildly dishonest declarations, and so the people learn that he is on earth and carrying on a business.

If, on the other hand, Dr. Capable Young Man is ethical, he puts a small sign on his window and his office door and a small card in the daily paper. He also sends announcements to his friends only, if he has any, in town. Then he sits down in his office and awaits for somebody with a bad tooth to find him. A man with a bad tooth does find him finally. He (our young man) relieves the pain and treats the case successfully. The patient goes away satisfied but not particularly impressed, for he has had the same thing done in the same way at about the same price by other dentists. So, relieved of his pain, Mr. First Patient promptly forgets all about Dr. Capable Young Man. If Dr. Capable Young Man had even charged a more dignified fee instead of cutting the fee to a minimum, Mr. First Patient would not have forgotten him so soon, and would have been therefore a better advertising medium.

Time goes on (as time has a habit of doing) and the young man still waits—so do his creditors. Or does the young man simply wait? Of course not. He loafs around the drug store, meeting everybody he can, handing out business cards; he joins a church, tries to sing in the choir (anything to attract attention to the "new dentist"); he joins a lodge; he never misses an opportunity of attending a card party or dance, or any function at which there is a gathering of people. And so, finally, in this way he accomplishes the same thing as the unethical young man does with printer's ink and lies, i.e., he lets people know he is in business and wants patronage.

I have mentioned the two most popular methods of starting into the practice of dentistry (and medicine). I do not like either one. I should dislike to declare in public print that I had a new method that enabled me—me, the discoverer, and no one else—to do all dental operations painlessly. Because I should not be telling the truth, or, if I were, I should be immorally selfish. I should not like to mingle socially with people for whom I cared nothing, and I should hate to have the joy of meeting delightful people alloyed with the business of getting them for patients.

Suppose a young man starting in the practice of dentistry acts on my absurd (?) advice and installs an X-ray outfit. It costs him \$250.00, and he does without a casting machine and a vulcanizer to make the purchase. He opens his office, and in due time Mr. First Patient appears. He relieves the patient of pain and treats the case successfully. The patient goes away satisfied and impressed. Why impressed? Because for the first time in his life he had an X-ray picture made of his teeth and the "new dentist" has taken a few moments to explain just why he made the radiograph, and how the study of it helped him to render better service than he would otherwise have been able to give.

What is the result of having impressed one patient? Why that patient tells all of his acquaintances about the man who made the impression. He wants a print to show his wife and friends. He is as truly and enthusiastically interested as a boy with his first razor. And through him, without leaving the office, a man will make himself known to and remembered by more people than he could meet at three dances, two card parties, and a box social. It will not be long before another radiographic case will come along, and that means another campaigner—another walking, talking, boosting "ad."

Few physicians have efficient X-ray outfits. (The old static machine is a useless relic). The old physician around the corner, to whom the new dentist has shown some of his work, gets a case of a fractured arm. There is one physician in town equipped with a modern X-ray outfit who makes good radiographs, but sad, yet true, there is so much enmity existing between him and the physician around the corner, that instead of referring the case to his brother practitioner of medicine Dr. Man-Around-The-Corner goes to the dentist and asks him to make the picture. The making of a radiograph of the arm is, compared to the making of a dental radiograph, an extremely simple procedure. There is no reason why he should not, so our young man makes the radiograph. Result: The old doctor around the corner, the patient with the broken arm, and the families of each, know about and talk about the new dentist who makes X-ray pictures.

In the course of one or two years the young man with the X-ray outfit, as a direct result of his radiographic work, has built up a practice that he could not possibly have obtained in any other manner in less than five or ten years. Now he need not send his cases to the laboratory to have his casting and vulcanizing done. He can buy the best machines in the market. And—an important point—he will have use for them when he gets them. He has simply invested his limited capital, believing that it is better to have a patient and have to send some of the work to the laboratory than to have the equipment and no patient.

Now, laying aside all consideration of the instalment of an

X-ray outfit as a practice-builder, and as an aid in practice, let us consider simply the investment and the returns therefrom. The outfit, let us say, costs \$250.00. Figuring on an extremely low estimate, let us suppose only ten radiographs are made the first year, the fee per case \$5.00. Just here let me say that \$5.00 should be the minimum fee. When used in the cases where the use of the radiograph is indicated, it is always worth more than that amount to the patient. Then why charge less? The work, properly done, requires time, skill and brains, and patients have been educated by the medical profession—from whom dentists should take lessons in setting fees—to pay from \$5.00 up for X-ray pictures. Ten radiographs at \$5.00 each makes \$50.00. The original investment of \$250.00 covers the cost of material for more than ten radiographs. The cost of the electricity to operate the X-ray machine is practically nothing—perhaps two or three cents for the ten pictures. So the \$50.00 may be considered net profit. \$50.00 on a \$250.00 investment equals 20 per cent. on the investment! And the outfit is unimpaired, ready to double the percentage made on it the next year.

Again I tell you—and does it sound as foolish as it did?—“If I were a young man just starting into the practice of dentistry I would buy an X-ray outfit, if I had to do without a casting machine and vulcanizer to pay for it. Or if I were engaged in the practice of dentistry and did not have as large or as lucrative a practice as I thought I should have, I would buy an X-ray outfit if I had to mortgage my office to do it.”

NOTES OF INTEREST.

Blood-poisoning.—There is great danger attending the use of a local anaesthetic on patients who are suffering from pyorrhoea alveolaris, since the force required or used during its injection disperses the pus sacs which contaminate the blood and produce toxinemia.

Toxinemia may have serious effects; in fact, several cases have been known in which death has supervened.—H. Cecil Riches.

Soldering Backings to Platinum Pin Teeth.—Much trouble is sometimes caused through carelessness when backing teeth with gold or other metal. To avoid it, after the case has been waxed-up, invested and scalded out, it should be placed on an asbestos or fireclay slab and slightly heated up until all the moisture has been driven off. The blowpipe flame should then be applied to the case and finally directed upon the solder.

If the case is allowed to remain upon the Bunsen beyond the drying-off stage, rapid and excessive oxidation takes place which

is likely to be absorbed by the platinum pins and to render them brittle and very liable to fracture.—C. A. S. & Co.

Analgesia is a state or condition of a patient immediately **before** or **following** general anaesthesia, when a loss of appreciation of pain is obtained, without the loss of the sense of touch.—H. Norman Taylor.

Hints on Melting Zinc.—Repeated fusing will render zinc very slow in melting, and when it is in this condition it contains much dross. The dross can be removed by using a little sal-ammoniac, and the melting can be improved by adding a pinch of aluminium to the zinc.—C. A. S. & Co.

Continuous Gum Work.—In cases of partial absorption of the gum on the labial aspect, especially if it is of long standing, a great difficulty is frequently experienced in making a satisfactory restoration. Vulcanite is very unsightly in the front of the mouth, and a ready-made gum section is either too wide or too narrow, or not of the proper contour.

The following method will be found to meet all requirements:

Take a piece of thin platinum foil, Ash's No. 0, cut it to proper size, and press it into shape upon the plaster model; this will yield a foundation upon which the mineral body can be built. Take some Ash's High-Fusing Body and pack as much of it as is required upon the foil in the same way as in building up modelling wax, plant the teeth in the mass (Diatric Teeth will serve as well as Pin Teeth) and remove the moisture from the mineral body with small pieces of white blotting-paper. When fairly dry the proper contour can be imparted to it with small spatulas. When the contouring is completed, the case is ready for removing and firing.

Take a fireclay tray such as is supplied with Mitchell's Furnace, place some dry silex upon it, and embed the section in it. (For firing Ash's High-Fusing Body a temperature of 1950° Fahrenheit—1065° C.—is required.) The dry silex holds the teeth and body together during the firing. After the body is fused and has cooled down, the gum enamel is applied. This fuses at 1750° Fahrenheit (955° C.), after which it can be soldered to a plate or used upon a vulcanite denture as required.—C. A. S. & Co.

Advantage of the Decimal System in Measuring Fluids.—The selling of fluids by weight is really the simplest. It is only necessary to place the bottle in the scale, counterbalance it, and then, after placing the required weight in the one scale, to pour the fluid into the bottle till the scales balance. This is a great saving of labour, as there is no subsequent washing of measures, and one fluid after another can be served out in rapid succession.—Edwards' Dental Quarterly.

The Uses of Barbed Broaches.—Barbed broaches are designed to serve several purposes: (1) To cut off or excise the pulp at the end of the tooth-root; (2) to remove the pulp after it has been severed, or to remove the remnants of a decomposed pulp, or one devitalized by arsenous acid; (3) to carry medicaments, with or without the aid of cotton, to or through the apical foramen; (4) to pack dressings or the various plastic materials used in making the root-filling. In the last case, the operation is sometimes facilitated by snipping off the point of the broach, and making the blunt end smooth by stroking it once or twice on an oilstone.—Dental Dispensary Record.

Preventing the Sticking of Modelling Compound.—In order to prevent the sticking of softened modelling compound to the fingers of the operator and burning them, the hands should be thinly coated with vaselin oil. By applying a thin coat of the same oil to the surface of the soft compound, its adhering to the teeth or mucous membrane, hence distortion of the impression, is avoided.—*Journal Odontologique*, per Sud-Est Dentaire.

Obtaining Correct Occlusion in Cast Gold Inlays in Occlusal Surfaces.—Gold inlays in occlusal surfaces of teeth, even if care be taken in regard to articulation, generally require some trimming after cementation. A good method for avoiding this consists in placing a piece of 60-gauge tin foil between the wax pattern and the opposing tooth or teeth, and requesting the patient to bite. This method renders subsequent trimming or adjusting unnecessary.—H. C. Moxham, *Commonwealth Dental Review*.

Caution in the Use of Aluminum Plates.—Before using to any great extent aluminum plates, it may save much loss and disappointment to note how often this material has come and gone since it was first suggested as a base for artificial dentures over half a century ago. Its lightness, the readiness with which it can be wrought, its cleanliness, and its beauty when nicely moulded and polished, are enchanting. Its chemical behaviour is tantalizing, and has always resulted in its being discarded sooner or later by its most enthusiastic admirers. Its behaviour with some acids places it close to the noble metals, and its resistance to atmospheric conditions has been noted as remarkable. It is vulnerable to the alkalis, it is slowly dissolved in the body fluids and in some oral secretions. In some mouths it endures a long time, in others it quickly disintegrates. When aluminum was produced by the older methods this uncertain behaviour was said to be due to its containing impurities; later methods produce a metal practically pure, but no more dependable when exposed to oral secretions than that of former days. The dentist who is fortunate enough to first use it in the mouth where it quickly proves incompatible is to be congratulated. Its use in surgery as

a temporary splint in fractures is suggestive. When so used in a year or two it entirely disappears, slowly dissolved and removed by the alkaline body fluids. It has failed to secure a permanent place among the desirable bases for artificial dentures, for good and sufficient reasons.—W. H. Trueman, Dental Brief.

A Hint Regarding the Use of the Rubber Dam.—The rubber dam is still necessary in many dental operations. Yet how many operators have ever stopped to think why the patients dislike it so much? If they would chew a piece of dam as it comes from the dental depôt they would learn one reason, for rubber dam not only tastes badly, it also has a most unpleasant odour. Both these factors, evil taste and odour, as well as the general cleanliness of rubber dam, may be improved by simply washing it before use. For this purpose, first soap and water are employed; then the piece of dam is rinsed in clear water, and next washed in water to which a liberal amount of mouth-wash has been added. It is then hung up and allowed to dry. After the dam has thoroughly dried, a coat of borated talcum powder is dusted upon it, when the dam is ready for use. By chewing a small piece, the operator can readily convince himself of the marked improvement which this treatment imparts to the rubber.—C. M. Torrance, D.D.S.

Eau de Cologne in Applying the Rubber Dam, taking Plaster Impressions, or Cleansing Root-canals with Soda Solution.—The application of the rubber dam can be rendered considerably more agreeable in regard to taste and odour if it is washed with soap and water, rinsed, and then immersed in water containing a little Eau de Cologne. After drying, the rubber dam is sprinkled with talcum powder.

A few drops of Eau de Cologne added to the water in which plaster is mixed renders the taking of an impression less disagreeable, and reduces the tendency to nausea.

As an addition to a soda solution which is highly recommended for rinsing root-canals, Eau de Cologne is greatly appreciated by patients with a delicate sense of taste.—*Monatsschrift fuer Zahntechnik und Verwandte Gebiete.*

Preparing Approximal Cavities in Upper Incisors and Canines for Porcelain Inlays.—The preparation for approximal cavities in incisors and canines should be as follows: If the lingual wall is supported by dentin, the usual concave outline on the labial surface should be extended at both the gingival and incisal angles, obtaining a slightly convex instead of the concave labial outline in general use. These extensions allow for the paralleling of the labial and lingual as well as of the incisal and gingival walls. The axial wall will then be at right angles to all of these walls. The convex labial outline secures even more resistance against force than one that is parallel with the lingual wall.

In this form of preparation the matrix is removed and the inlay is inserted from the labial surface.

All of the former methods of preparation for this class of cavities seem to have been incorrect, as the labial half of the cavity, including the axial wall, has been more or less saucer-shaped because of the concave labial surface. It is really remarkable that so many inlays, placed in cavities prepared in this manner, have resisted the dislodging force.—F. E. Cheeseman, Items of Interest.



YEN-OR

ZINC CHLORIDE
FORMALDEHYDE
CHLORPHENOL

A PULP-CANAL FILLING AND TOOTH DRESSING

Antiseptic. Anti-putrefactive. Dessiccant.
Penetrative. Germicidal.



Yen-or is a carefully prepared Germicide of great value in Dental Practice. Made from the prescription of a qualified Dental Surgeon who has made pulp treatment a special study for over twenty-five years. This preparation has been used by him very successfully for several years.

YEN-OR *(Continued)*

Advantages:—

Always ready for use.

Easily introduced into pulp-canals.

And in canals not easy of access.

Easily removed.

Has no irritant action.

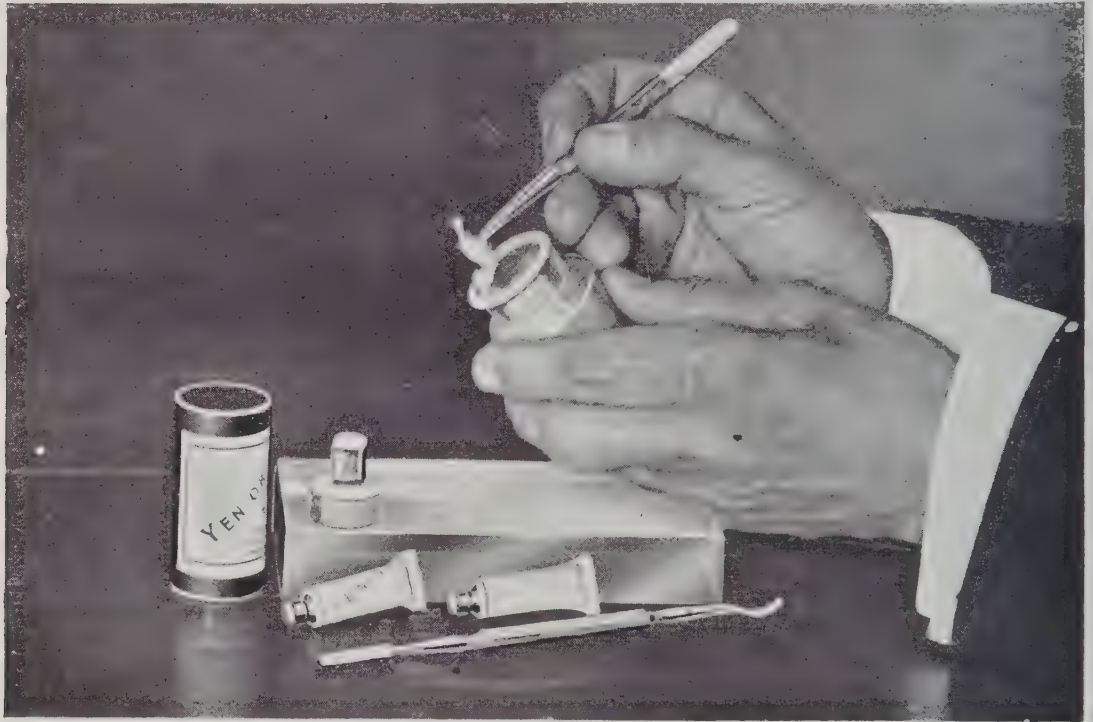
Does not discolor the teeth.

Small remnants of living or devitalized pulp are rendered harmless.

Penetrates deeply into infected or softened structure.

And rapidly destroys bacteria, so is useful for dressings also.

It keeps well in collapsible tubes of pure tin.



Method of using:—

It can be conveyed into the pulp-canals on a smooth probe or bristle followed by a gutta-percha point, or introduced on very small pieces of bibulous paper.

A good method is as follows:—

Bibulous paper is torn into strips about half an inch wide and four inches long; they are best kept in a wide mouth stoppered bottle—containing a few crystals of thymol—ready for use.

YEN-OR (*Continued*)**To fill a pulp-chamber:—**

Squeeze out a little Yen-or paste from the tube on to a mixing slab; take a strip of the bibulous paper from the bottle, lay the end on the slab, and with a spatula smear the end of the paper with the paste; then scrape off small pieces of the paper, and lay on the slab, side by side, enough to fill the canals. These small pieces are easily conveyed into the canals with a fine smooth probe with a blunt end.

When the pulp-chamber is full, take up any excess of paste with a pellet of bibulous paper, then seal with a pellet of cotton and mastic while the material is being prepared to complete the filling of the cavity.

**As a dressing:—**

A small piece of bibulous paper treated in the same way may be laid as a dressing over the sensitive area in tender teeth; under a filling. Any cavity may be wiped out with Yen-or with advantage, especially where it is difficult to remove all the softened dentine.

Supplied in Collapsible Tubes, - Each \$1.80.

SOLE AGENTS:

Claudius Ash, Sons & Co., Limited



Ash's Fine Locking Tweezers

These Tweezers are very accurately made with fine, even biting beaks that afford you perfect satisfaction.

Price each - - 30 Cents

Ash's Vulcanite Broach Holder

This is a neat, well balanced instrument that enables you to obtain a better and more delicate feel to your broach.

It is accurately made, gripping the broach perfectly with a proper clamp.

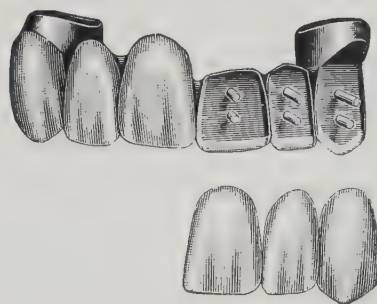
Unlike the ordinary holder it is an ornament to your table.



Price - - - 30 Cents

THE NEW TOOTH

Dimelow Detachable Facings



¶ The manifold advantages of detachable teeth has been clearly demonstrated in recent years, yet for various reasons the only available detachable teeth have not become universal in their use.

¶ We now offer you the Dimelow Detachable Facings which overcome all the objections put forward to other teeth of this class.

¶ The following are some of the advantages :—

Ease in repairing, all being interchangeable.

Porcelain not subject to heat in Soldering.

Take up perfectly all gum recession.

Can be tipped with Gold if desired.

No weakness in tooth as body is not cut away.

No special Backings or Tools required.

¶ In addition THE DIMELOW has all the advantages ever claimed by any detachable facings.

¶ The posterior teeth are stocked in both veneer and all porcelain forms.

¶ The three following pages illustrate the various moulds.

¶ For prices and special assortment see outside back cover.

Dr.

Claudius Ash, Sons & Co., Limited
SOLE AGENTS

DIMELOW DETACHABLE FACINGS

Anterior Moulds



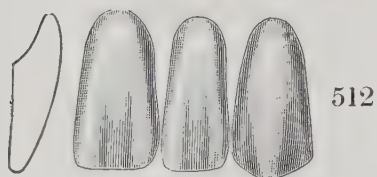
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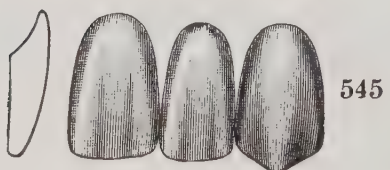
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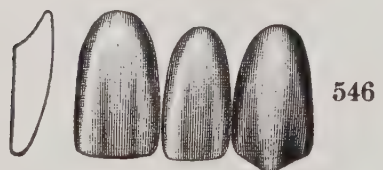
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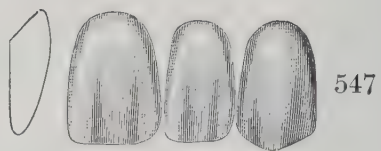
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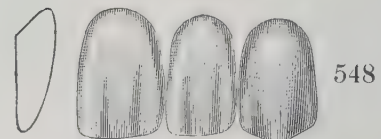
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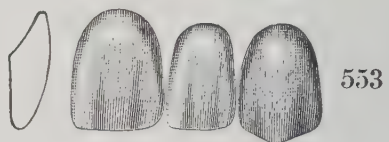
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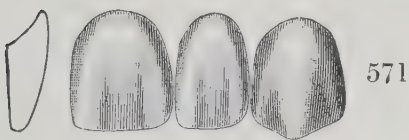
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DIMELOW DETACHABLE FACINGS**Anterior Moulds**

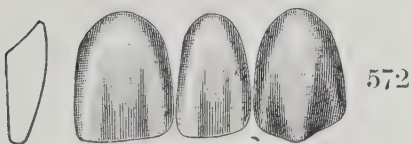
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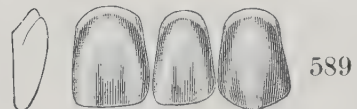
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DIMELOW DETACHABLE FACINGS

Lower Moulds



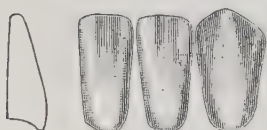
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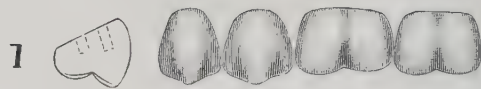


512



518

All Porcelain Posterior Moulds



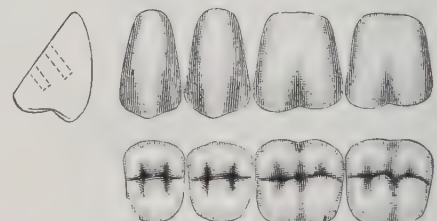
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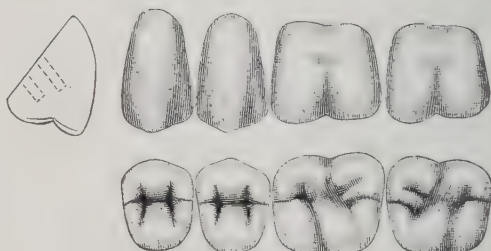
2



3



4



5



The Dimelow Facing

DIRECTIONS FOR MAKING BACKINGS.

After grinding the facing to fit the gum and bite and beveling it toward the back, as per Fig. No. 4, cut a piece of 32 to 36 gauge gold, large enough to form a backing, which will extend well over the cutting edge. Cut a small slit in the gold, long enough to let the staple through.

After placing the staple in position in the tooth, force the cut gold over the staple until the thin arch protrudes.

With a pointed instrument tuck the gold up close to the staple, and under the arch. Bend the gold around the sides of the facing and well over the cutting edge. Trim off some of the surplus. Nip the gold at each of the cutting edge corners.

Wrap the whole in tissue paper to hold the three pieces in their respective places. Place in a swager, and with a few blows of the hammer or by pressure, the gold will adapt itself nicely to the facing and the staple. Remove the backing and the staple will come with it and will be held in place by the gold. Hold in flame and solder.

Most dentists will desire to tip the facings for protection, as the experience and practice of years has demonstrated its wisdom.

The thin gold tip that has been swaged over the cutting edge can be reinforced by burnishing a piece of thicker gold onto it. Then remove the porcelain and grasp the two pieces of metal with pliers, and after applying flux, hold in the flame of a Bunsen Burner and solder.

The directions above outlined for backing the Dimelow Facings apply also to backing the Dimelow All-Porcelain Posteriors.

As will be seen, these are constructed on exactly the same principle as the facing, but in swaging the backings as much gold should be brought down over the porcelain as the conditions will allow, this forming a cup into which the porcelain sets.

Dimelow Facings and All-Porcelain Posteriors lend themselves most perfectly to casting work. The great simplicity of simply inserting the staples in the holes and building up with wax for the balance of the crown or bridge will appeal to everyone. In this use care should be taken to see that the facing is well oiled to prevent the wax sticking to the ground surfaces, and the oil should be thoroughly removed to allow the cement to hold. Dipping the tooth in chloroform is an easy and certain method of removing the oil.

If in trying these facings in the mouth, or, in fact, during any operation, they should hug the backing closely, a bit of sticky wax applied to the face of the tooth will make the removal extremely easy.

In cementing, it is important to use a good crown and bridge cement, mixed thin.

This should be placed in a thin layer over the back of the tooth and worked down into the pin-holes with a fine instrument.

A small amount of cement should also be placed on each pin of the staple and the facing forced firmly to place.

Ash's Gum Pink Light Rubber

Gives the closest reproduction of the natural gum of any Dental Rubber. While it has been extensively copied it has never been done successfully. Should any salesman tell you that another brand is "just as good as Ash's," use your own judgment.

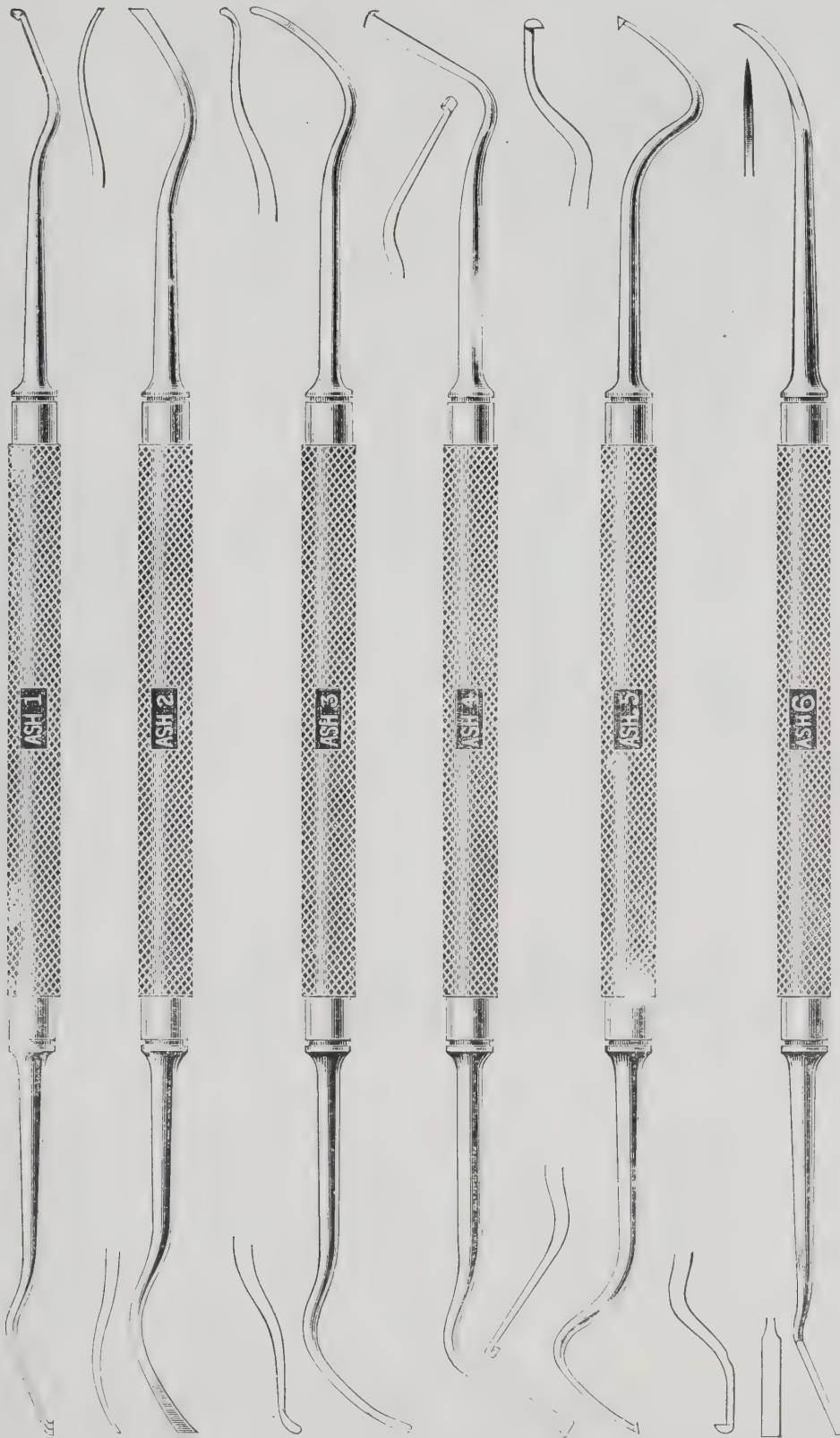
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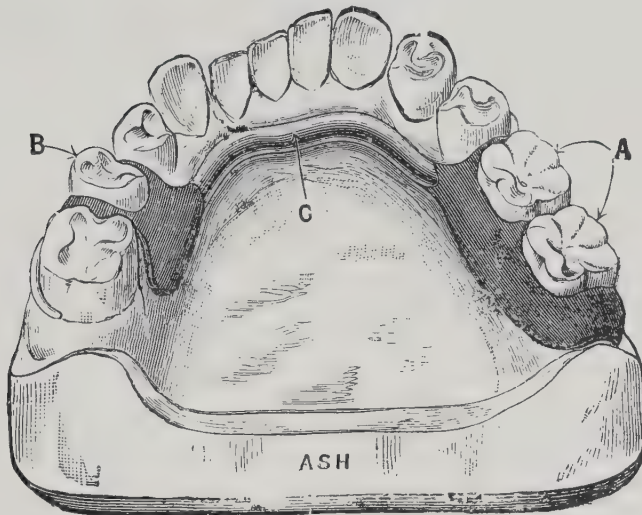
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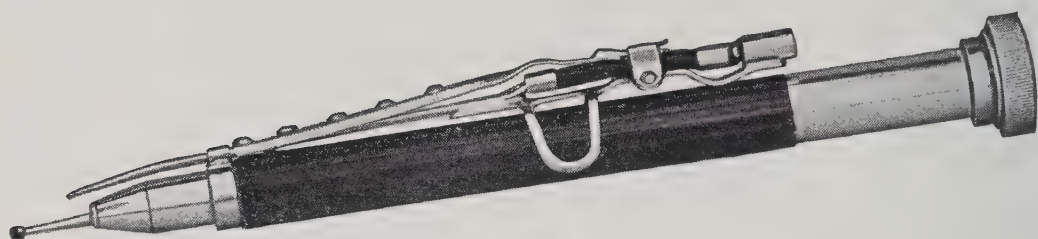
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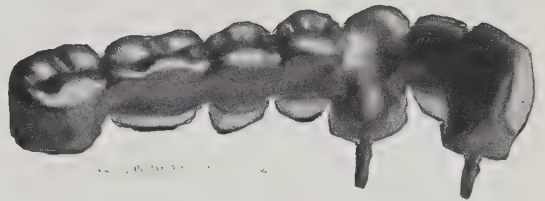
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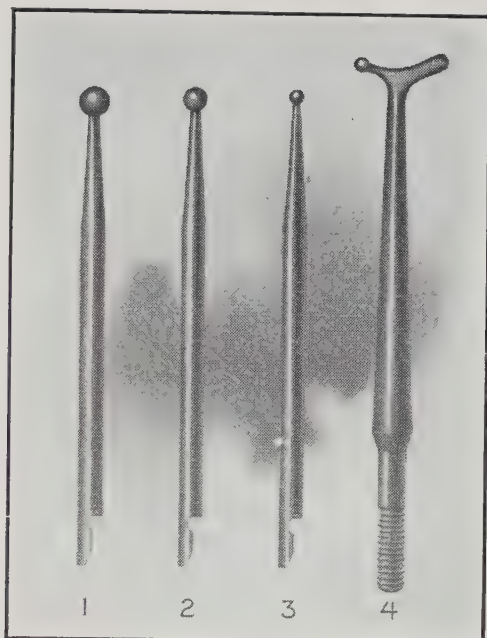
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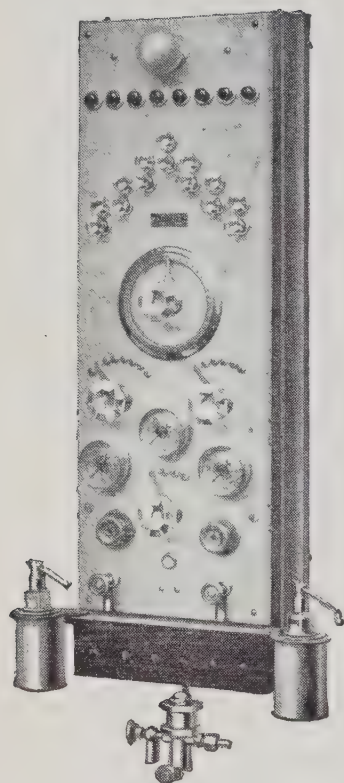
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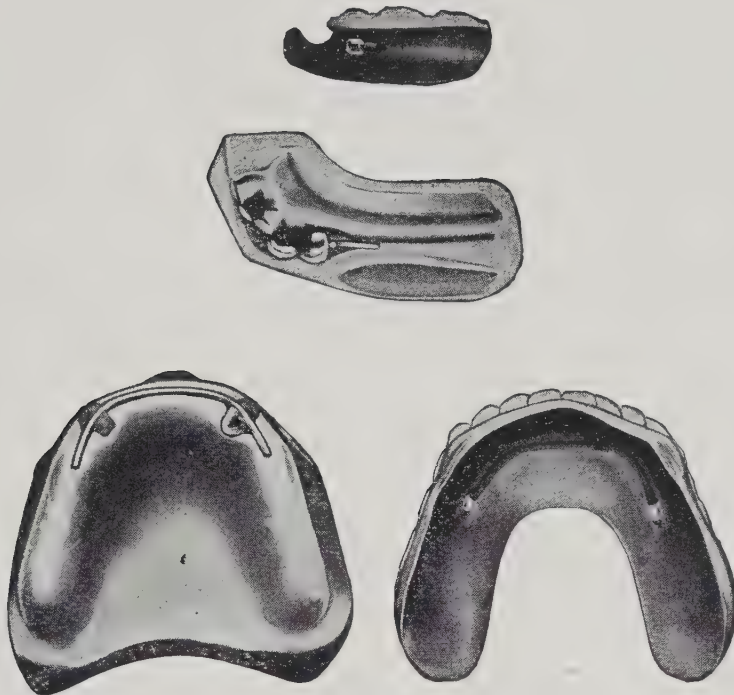
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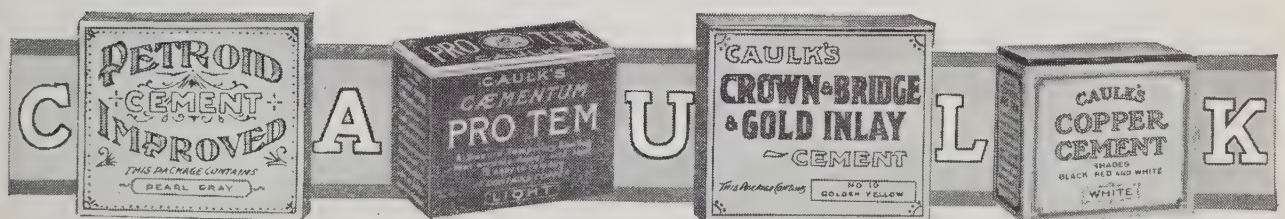
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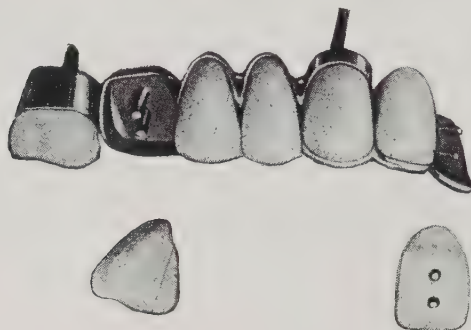
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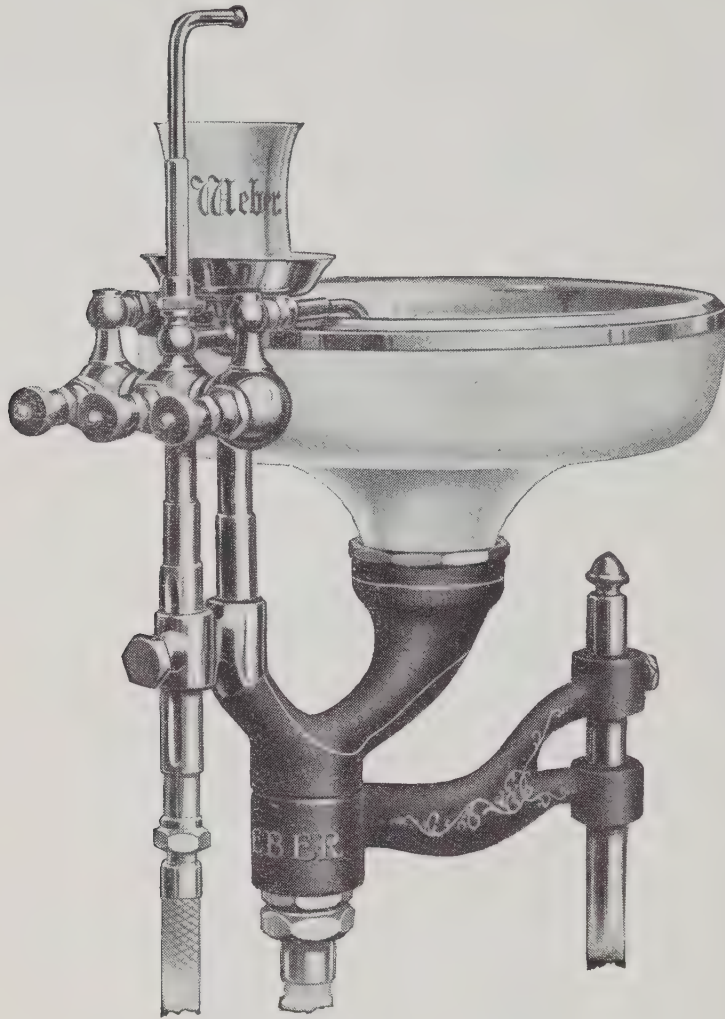
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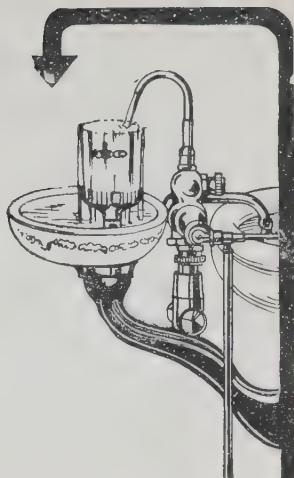
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21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
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14K Dark or Light.....	.75 dwt.	.70 dwt.	.69 dwt.
16K Dark or Light.....	.85 dwt.	.80 dwt.	.79 dwt.
18K Dark or Light.....	.89 dwt.	.84 dwt.	.83 dwt.
20K Dark or Light.....	.97 dwt.	.92 dwt.	.91 dwt.
21K Dark or Light.....	1.03 dwt.	.98 dwt.	.97 dwt.
Coin	1.04 dwt.	.99 dwt.	.98 dwt.
22K Dark or Light.....	1.05 dwt.	1.00 dwt.	.99 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.14 dwt.	1.09 dwt.	1.08 dwt.
Clasp Plate	1.30 dwt.	1.25 dwt.	1.20 dwt.
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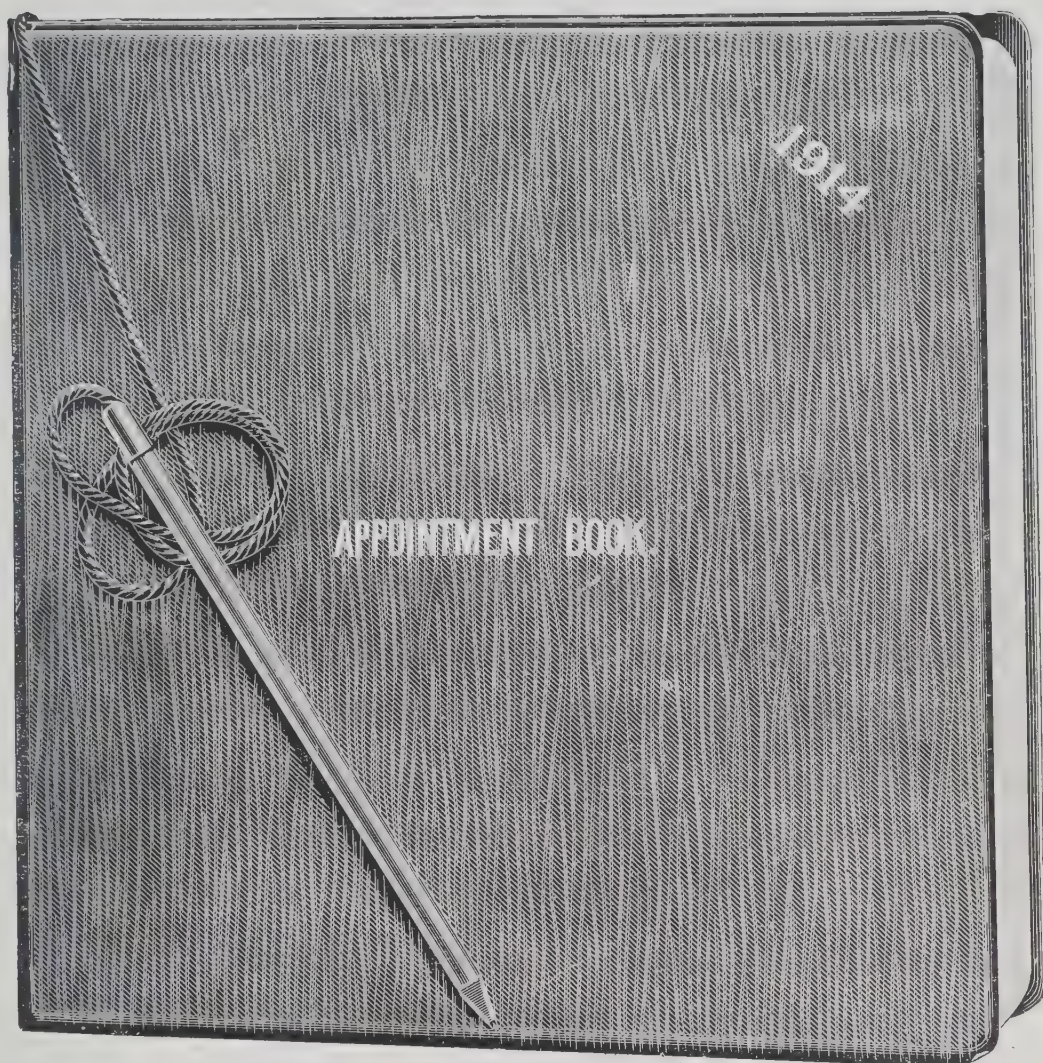
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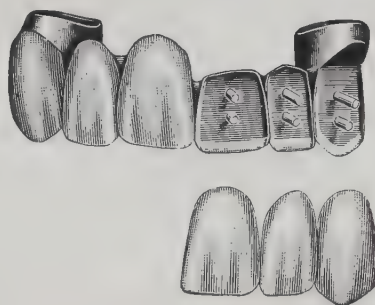
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The only replaceable tooth that can be satisfactorily tipped with gold.

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DURABLE :: NON-EXPANDING :: HIGHLY RESISTANT
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¶ The leading features of this cement are its unyielding tenacity, extreme density and durability.

¶ It has the highest non-expanding qualities which it is possible to impart to a first-class osteoplastic cement.

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○NE ship goes East, another goes West
By the very same wind that blows;
It's the trim of the sails and not the gales
That determines the way she shall go.

Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, MARCH 1, 1914

No. 6

THE CRACKING OF TEETH IN SOLDERING.

By GEORGE J. GOLDIE, L.R.C.P., L.R.C.S., L.D.S. Edin.

Of all the accidents to which metal work is liable, perhaps the most vexing is cracked teeth. Nothing can be more annoying than to see hours of good work thus rendered useless in the final soldering. In considering the causes of such mishaps, we of course put out of court such factors as carelessness, undue haste in drying, etc., as irrelevant, and proceed at once to examine the more important ones, viz., boraxing and investing. The application of borax, although it may seem a matter of no account, is yet a more serious operation than a mere glance would warrant one in supposing; it seems to me to be the only really difficult part in soldering, and accordingly it admits of no neglect.

The careless use of borax as a flux produces two kinds of cracks in porcelain—firstly, the crack which runs most usually from end to end of a tooth; and secondly, the crack which is confined to the edges in apposition to the gold backing. The first of these—the more deadly of the two—is due to the presence of borax between the tooth and the backing, and as it most often reaches that position by means of the pin-holes in the latter, its ravages can be easily cut short by care in “backing” the tooth. The second kind is not quite so easily accounted for. It is difficult to explain why the mere contact of borax with porcelain and gold under a red heat should result in a crack, but that it is so has been proved by experience. If, in a backed tooth, borax be allowed to flow over the edge of the backing on to the tooth substance, a hair-line crack will be found in the latter, running more or less parallel to the former and marking the limit of the borax invasion, thus showing that the crack is directly due to the flux. Borax seems to be so adhesive that after being flown by the flame it draws away a thin layer of porcelain as it contracts in cooling, producing the crack described. Such fractures are deep or shallow, away from or close to the gold, according to the amount of flux at fault, and their remedy is to be found in careful investing. While these remarks are true of ordinary plate work, they are more true

concerning crown and bridge work, where the high grades of solder and gold will necessitate the use of higher temperatures in soldering.

It will now be seen that all joints should be made flux-tight. Where surfaces are to be made continuous by solder, as when a tooth is attached to a plate, or, in crown and bridge work, when the porcelain facing is to be joined to the cap, the point of contact must be made as small as possible by fine-fitting, and any space which may then be present ought to be filled with gold foil; this, however, need not be condensed to the solidarity of a filling in the mouth. Needless to say, the porcelain must be all hidden by the investing material. Now comes the application of the flux.

Borax can be used in two forms, viz., as a vitrified powder got by driving off the water of crystallization from ordinary borax and calcining the resultant clear mass, and as a mixture with water made by rubbing a piece of borax on a moist slab. Each of these has its good points. The powder, being thoroughly dry, does not swell when heat is applied to it, so that even if it should manage to get in between a tooth and its backing no crack will result; here it is distinctly better than its ordinary moist rival. A combination of the two, however, seems to answer best. The surfaces to be soldered, having been thoroughly cleaned, should be sparingly painted with some of the moist form mixed very thick (care being taken not to touch the investment), and over this some of the powder should be dusted. The piece may then be dried and soldered in the usual way, and if any more flux be required during the operation, the powder should obviously have the preference.

As regards the investing material, a word may not be amiss. It will be noted above that it must be kept free from borax. The reason why I emphasize this is that, should the error of deluging metal and investment indiscriminately with the flux be committed, the operator will find on using the blowpipe that the surplus borax will flow into the porous investment, and, sinking in, will drive it before it, and so lay bare the edges intended to be covered. This, of course, will produce the small edge cracks before mentioned. The investing material which gives the best results is marble dust in combination with plaster. It forms a hard, solid investment, and has the advantage over its softer compeers—such as asbestos—of being less porous, so that even should borax get on to the parts round the backing (and it is sometimes difficult to avoid), the denudation of the porcelain is not so great as when other materials are employed.

Soldering Backings to Platinum Pin Teeth.—Much trouble is sometimes caused through carelessness when backing teeth with gold or other metal. To avoid it, after the case has been waxed-up, invested, and scalded out, it should be placed on an

asbestos or fireclay slab and slightly heated up until all the moisture has been driven off. The blowpipe flame should then be applied to the case and finally directed upon the solder.

If the case is allowed to remain upon the Bunsen beyond the drying-off stage, rapid and excessive oxidation takes place, which is likely to be absorbed by the platinum pins, and to render them brittle and very liable to fracture.—C. A. S. & Co.

HOW TO USE THE GAUGE AND THERMOMETER TOGETHER IN VULCANIZING.

We are so frequently asked why the Gauge and Thermometer, when used together in vulcanizing, do not agree, that we think it desirable to state that it is not possible to obtain permanent agreement between them.

Should they by chance agree when they are both new, the agreement will not last very long, owing to the fact that the Bourdon tube in the Gauge becomes gradually weakened by continued use.

We ourselves always use a Gauge and Thermometer together, but we never rely upon the Gauge for temperature or pressure; we simply employ it as a gas-regulator and as a useful aid in fixing the Thermometer at a given temperature. Our plan of using them together is as follows:—

We set the red hand of the Gauge, say, at 100 lbs., put the Thermometer in a bath of mercury in the Thermometer tube, and gradually get up the heat until the Thermometer registers 315° Fahrenheit—the temperature recommended for vulcanizing nearly all our dental rubbers.

If the blue hand on the Gauge has not reached the red hand when the Thermometer registers 315° Fahrenheit, we turn the red hand back to within a point of the blue and leave it there.

On the other hand, if the Thermometer does not register 315° Fahrenheit when the blue hand of the Gauge has reached the red at 100 lbs., we advance the red a little to allow the blue to go forward until the Thermometer does reach 315° Fahrenheit.

The red hand is then left at this point and the Vulcanizer is used with Thermometer and Gauge without any alteration until we find that the Thermometer fails to rise to 315° Fahrenheit; when this occurs, we slightly advance the red hand to admit of the Thermometer reaching 315° Fahrenheit.

By using the Gauge and Thermometer together in this way, we never trouble about the weakening of the Bourdon tube; for so long as both Gauge and Thermometer are intact we are quite sure, not only theoretically, but also by practical results, that we

always work at 315° Fahrenheit, and nothing is easier than to advance the red hand a point or two from time to time as occasion requires to allow of the Thermometer always registering 315° Fahrenheit.

(N.B.—315° Fahrenheit are equal to 157° Centigrade.)

TO GRIND AND POLISH ASH'S MINERAL TEETH.

By R. P. LENNOX, of Cambridge.

Although Ash's Mineral Teeth have now been before the profession since 1837, and many references are made in dental literature to the fact that they are of the same non-porous texture throughout, and can therefore be ground and polished to any extent that may be desired to suit special cases, it is yet remarkable that no writer has attempted to give definite instructions for grinding and polishing them.

By way of introduction to making such an attempt, I may say in the first place that the density of Ash's mineral teeth permits of their being ground to a very fine edge without the risk of chipping, and, if necessary, the ground surface can afterwards be highly polished. A further advantage is the absence of the particles of porcelain which in some teeth are found encroaching upon the pins, to remove which, when backing teeth, involves annoyance and loss of time.

To Grind the Teeth.—For this purpose I use carborundum wheels running in a trough of water when doing the work in the lathe, and carborundum wheels and points when doing it with the dental engine.

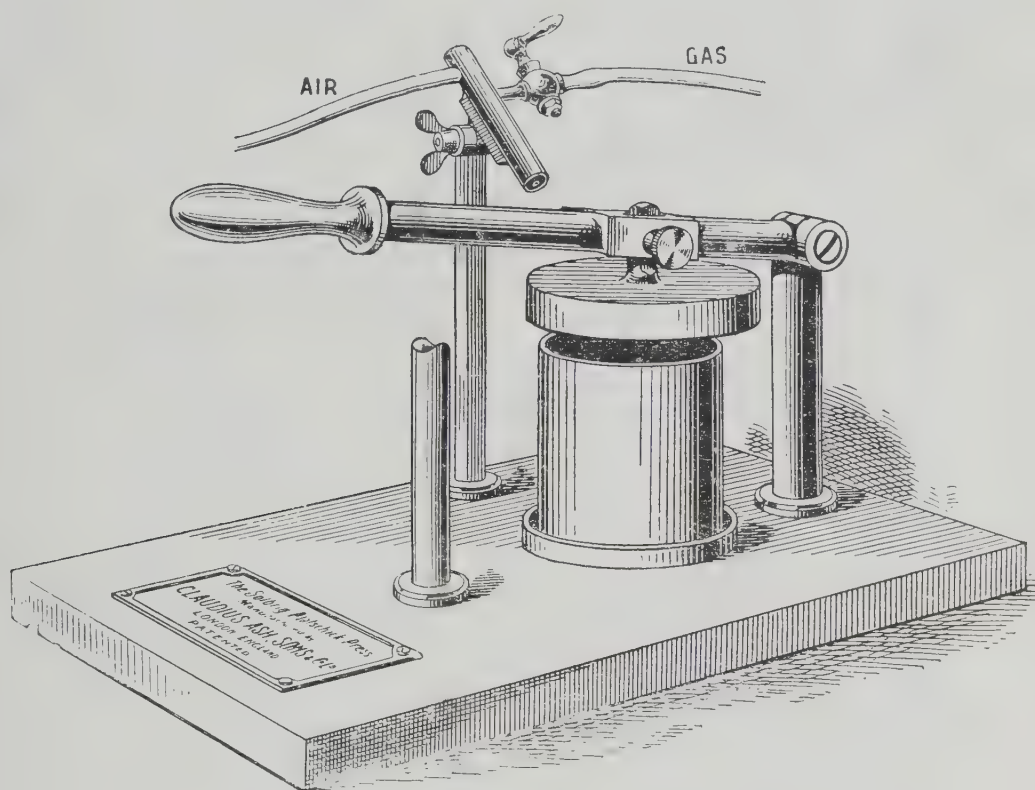
The use of carborundum pretty well does away with the need for a steel tool in countersinking, but where a lathe or dental engine is not at hand the teeth may be countersunk by means of a graver and camphorated turpentine, into which the graver is dipped from time to time.

To Polish the Teeth.—Smooth down the surface with one of Ash's Tan Stones, either in the lathe or in the engine; follow on with a buff wheel and superfine pumice—a little soap pressed against the buff wheel is an advantage—and give the final polish with a soft lathe brush and whiting.

This method of polishing produces a surface on the teeth which is equal to the original surface.

Solbrig-Platschick Press

Is far and away the best and most complete outfit in the world for all kinds of dental casting, from the smallest to the largest work.



It is unrivalled in its suitability for casting plates for full and partial dentures, bridges, crowns, inlays, regulating appliances, splints, etc.

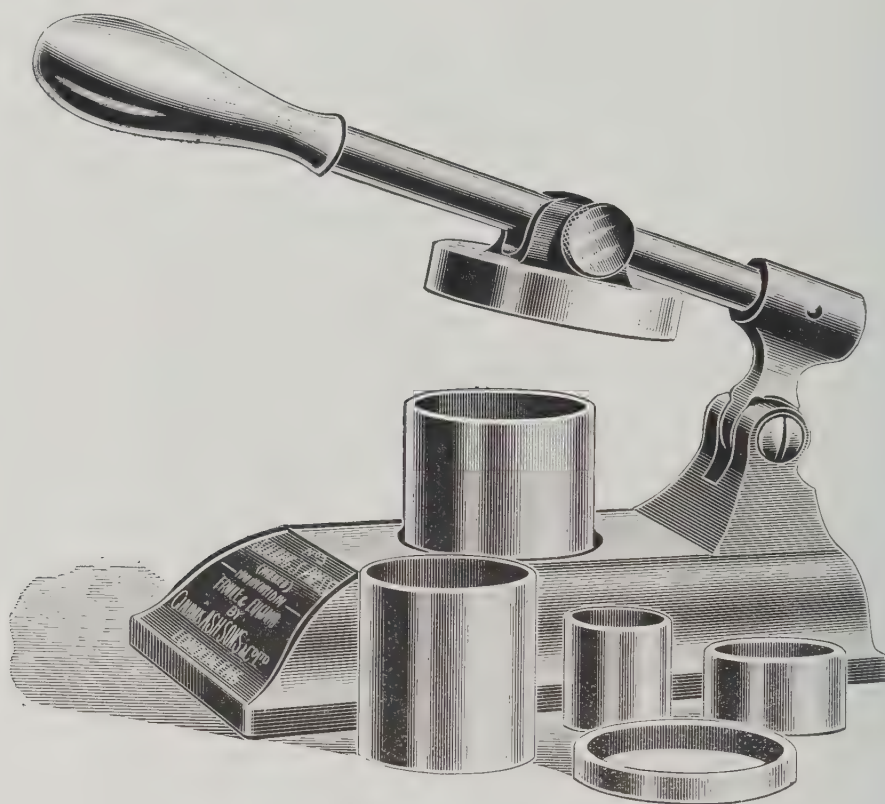
The various sizes of cylinders and caps enable the operator free choice of any size cylinder, so that one operation of investing and casting he can put through as many as a dozen inlays. The saving of time in this way is obvious. There is no brittleness about the plates cast in the Solbrig Press; the metal is tough and resilient as in struck-up and swaged plates. The appliance is made of the best materials, practically indestructible, and is never out of order. Complete with accessories, including powerful blow pipe and large heater.

Price \$60.00

Solbrig's No. 3 Press

(Patented).

For Casting of Gold and other Metals, Inlays, Crowns, Bridges, Backings, etc.



No. 2 Press and accessories consists of:—

Press,

2 Cylinders, Nos. 4 and 5,

2 Hollowing Cones,

1 box Asbestos Discs,

1 box containing—

12 Sprue Wires.

12 Rubber Bands,

12 Sticks Wax,

1 Bunsen Burner,

1 Support for Holding Cylinders over the Bunsen,

1 pair Cylinder Tweezers,

1 tin Coating Material,

1 Book of Directions.

Price with accessories, \$20.00

Cast Aluminum Dentures

(Made in Solbrig-Platschick Press).

The illustration below shows three aluminum dentures cast through one sprue. This piece of work (most easy of accomplishment) demonstrates the effectiveness and wonderful power of the press. Each of these dentures came from the cylinder with no defect or blemish of any kind, and required no polishing.



Write us respecting this work, which means both credit and profit to you. Information will be promptly and cheerfully given, and if you are in Toronto, we will gladly demonstrate the work to you.

Claudius Ash, Sons & Co., Limited

Rauhe's Suction for Cast Aluminum Dentures

In this Suction, Dr. Rauhe of Dusseldorf has given us the most successful device for Cast Plate retention yet produced.

It is made with the scientific exactness and care that have characterized RAUHE'S SUCTIONS for Vulcanite Dentures.

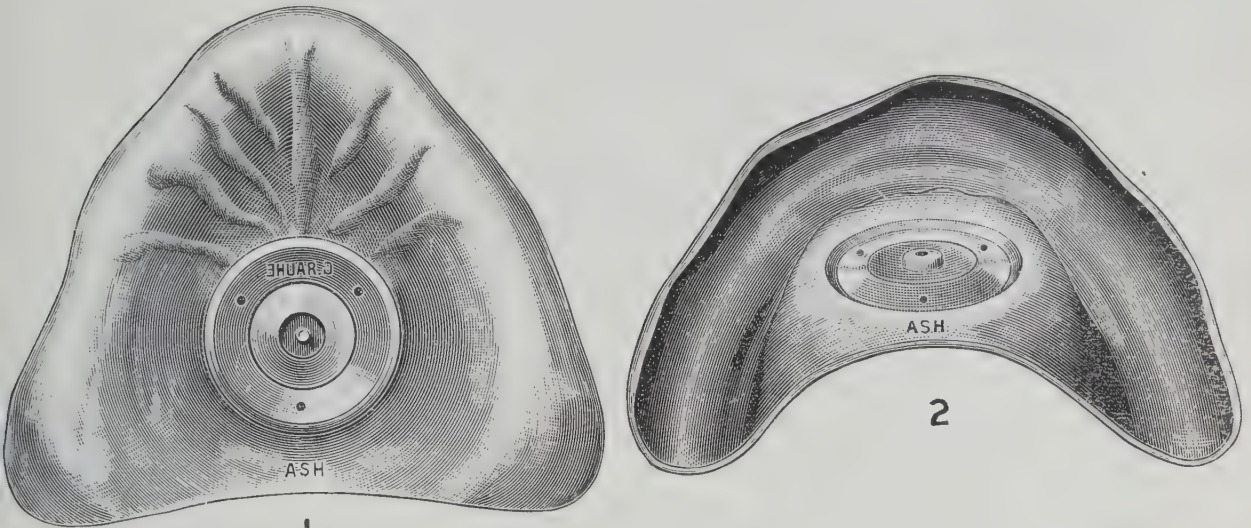
The Cast Aluminum Suction is a simple one to attach, and is highly satisfactory

Price	-	-	each	.50
In lots of half dozen	-			2.50

FOR DESCRIPTION SEE NEXT PAGE

Claudius Ash, Sons & Co., Limited

Rauhe's Aluminum Alloy Suction Discs FOR CAST DENTURES

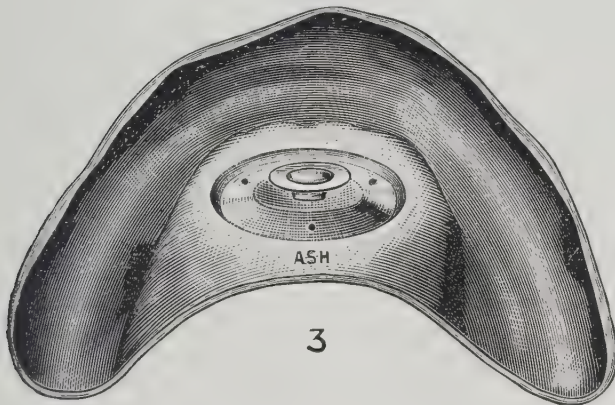


1
SHEWS METAL FORM MOUNTED ON MODEL

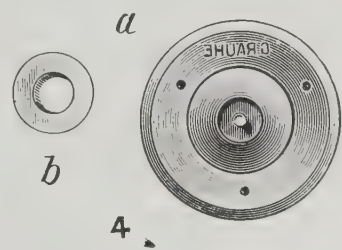
DIRECTIONS FOR USE

- I. Shape Metal Form (Fig. 4) to Plaster Model with fingers, and secure it in position with the small pins which are supplied with the suction.
- II. Mount the Wax Plate over the Metal Form and gently press it into position with a soft sponge dipped in warm water.

After the wax plate has been reinforced with Coating and Embedding material, it can easily be removed from the Model. Upon removal, a stud-like projection in wax is left in the centre of the metal form, as shewn in Fig. 2.



3



4

- III. Upon this stud-like wax projection gently place the Metal Stud B and fill up the centre flush by dropping a little melted wax into it as shewn in Fig. 3.
- IV. The Wax Plate is then invested and finished, after which the Rubber Disc is stretched over the stud and the Denture is ready for wear.

N B.—To obtain the best results, the Rubber Disc should be reversed every morning by the patient.

SOLE AGENTS

CLAUDIUS ASH, SONS & CO., Limited

Solbrig Investment Material

SOLBRIG Embedding Material was the first of the so called Liquid Investments, and to-day holds the first place as a necessary adjunct to casting.

The Embedding Material is an expanding one under heat and being of a very open texture allows of free escape of air from the mould ahead of the advancing metals.

Solbrig Coating Material is of extra fine texture and painted next to the model, gives the finest, smoothest finish to the metal.

PRICES :

EMBEDDING MATERIAL—

3 lb. Tin	....	....	....	\$ .75
28 lb. Tin	....	....	....	3.00

COATING MATERIAL—

3 lb. Tin	...	....	....	1.25
7 lb. Tin	....	....	....	3.00

Claudius Ash, Sons & Co., Limited

Aluminum for Casting

If you Want the Best Aluminum Specify

‘ASH’S’

If you have not already used ASH'S 99 per cent. Aluminum or ASH'S Aluminum Alloy, send in a Mail Order NOW.

We have many unsolicited testimonials from one end of Canada to the other.

One of our customers writes :—“Send me 20 packets ASH'S Aluminum Alloy for casting metal plates. **I find this good.**”

PRICES

Aluminum Ingots.....per lb.	\$1.50
Aluminum Ingots.....per half lb.	.75
Aluminum Alloy.....per pkg.	.65

Claudius Ash, Sons & Co., Limited

The Best Wax for Denture Casting **Ash's Pink Wax No. 3**

THIS preparation is ideal for the
Wax form for Cast Aluminum
Dentures.

It is of the correct thickness for this
work and is very evenly rolled.

It burns out cleanly from the mould
and leaves no carbon deposits.

Many satisfied customers use it for
all Laboratory purposes and find it
an excellent and inexpensive preparation.

It requires very little heat and is
easily manipulated,

In 1 lb. Boxes - 75c.

Claudius Ash, Sons & Co., Limited

A Page of Good Dependable Waxes

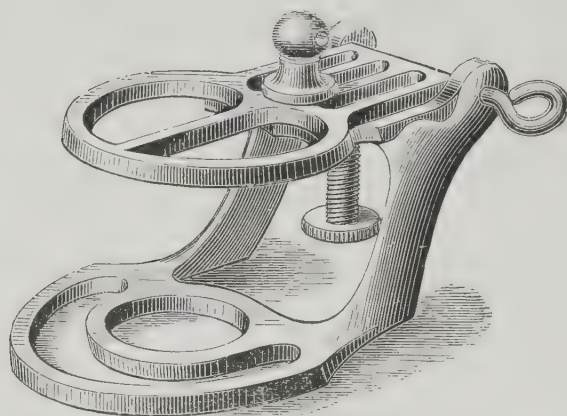
OUR many years of experience as makers of high class Wax for Dental purposes has enabled us to put products of the highest merit at reasonable prices at the choice of the discerning Dentist.

Ash's Pink Wax, No. 3 (low heat) per lb	.75
Ash's Pink Wax, Extra Tough	" 1.00
Ash's Yellow Wax, Extra Tough	" 1.00
Ash's Black Wax (Sticks) for Inlays per box	.35

A Mail order, or a request from any of our travelling men will bring you prompt service

Claudius Ash, Sons & Co., Limited

A Substantial Articulator



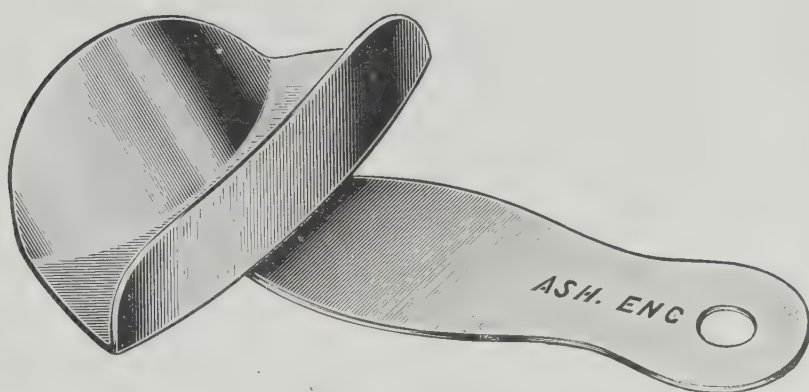
Ash's Plain Line Articulator is an article that has stood the test of years. It is a thoroughly well made British article and will give you honest service.

It comes to you in polished finish in neat card box.

PRICE - - \$1.05

Claudius Ash, Sons & Co., Limited

Ash's Fig. 3 Swivel Tray



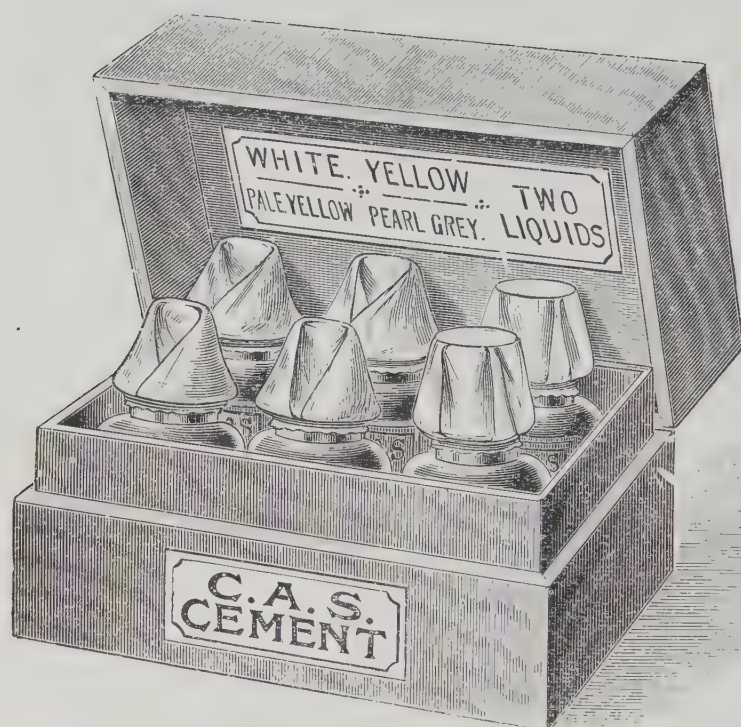
This Tray is a superior article to many that are on the market. It is made in our own factory, and is a thoroughly reliable British product, costing you no more than those of inferior quality.

A Good Stock is carried in Toronto, and your wants can be promptly supplied.

Price - - 25 Cents

Claudius Ash, Sons & Co., Limited

Ash's C.A.S. Cement



Supplied in the following six shades:—White, Pale Yellow, Yellow, Pearl Grey, Grey, Brown.

Noted for the following qualities:—**Easy Working, Tenacity, Stability, Imperviousness, Enamel-like Surface, Hardness and Edge Strength.**

We claim that

It is unsurpassed by any Cement of the Oxy Phosphate class.

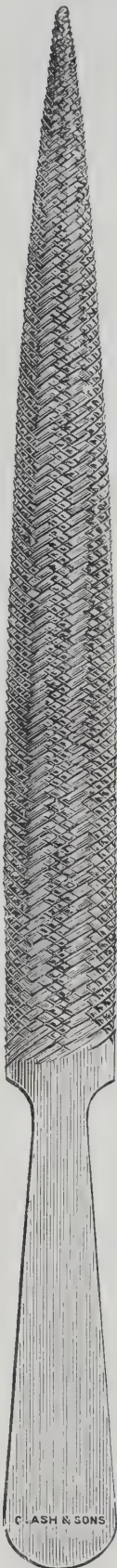
It is synthetically prepared and has stood the test of time.

1 Colour Packet, Small	\$ 1.50
6 Packets for	7.50
1 Colour Packet, Large	2.50
6 Packets	12.00
4 Colour Packet	2.50
6 Packets	12.00

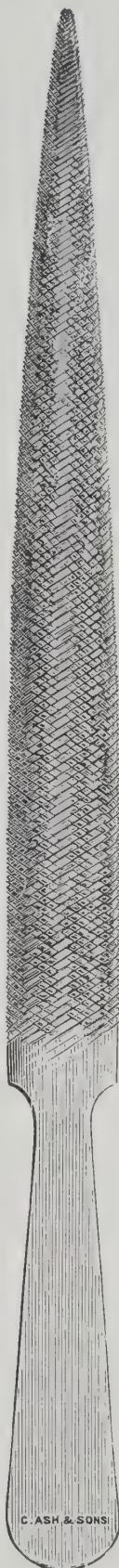
Stub's Files



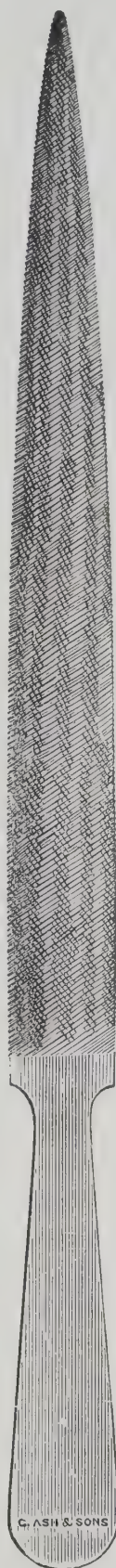
Rasp



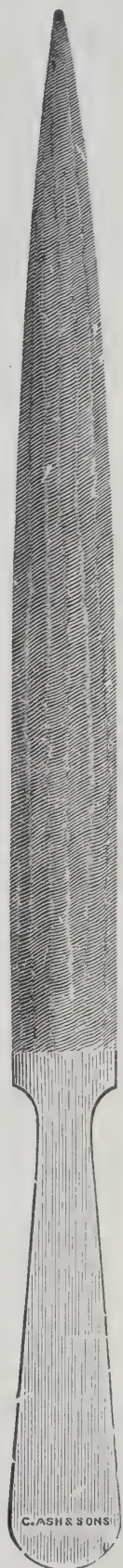
Ex-Rough



Rough



Bastard



Smooth

Stub's Files

The illustrations on the previous page show different styles of 4½-inch Files, full size. In the larger sizes the cuts run somewhat coarser. The Bastard and Smooth are intended for Metal Work, the other kinds for Vulcanite Work.

Stub's Files have for years been the standard of the world, and no others have approached them in excellence.

Stub's Double Ended Files

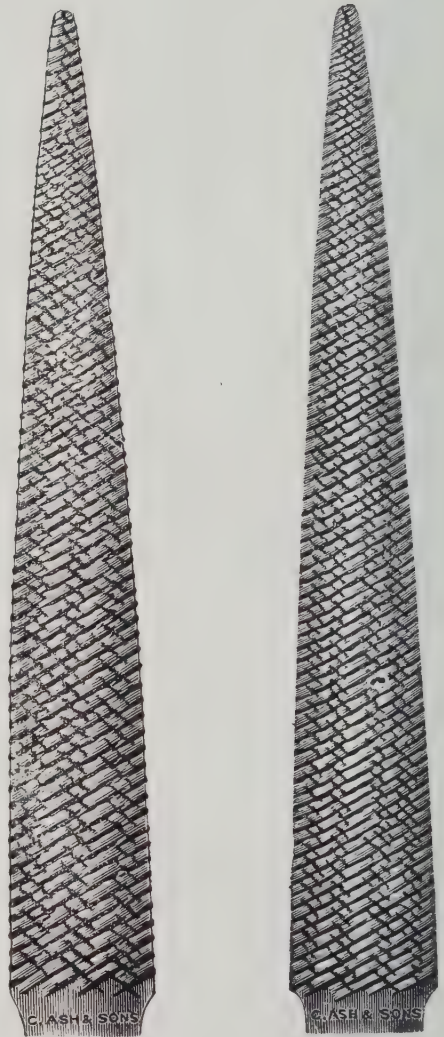
For Vulcanite Work

HALF ROUND, ONE
END EXTRA ROUGH,
THE OTHER END
: : ROUGH : :

These Files like the single ended patterns are excellent, and after having used them you will refuse all other makes.

The prices of these Files are most reasonable.

Send us your order—it will be promptly executed.



Claudius Ash, Sons & Co., Limited

Ash's Cone Socket Mirrors



No Cone Socket Mirrors have ever been placed on this market, of a like quality at so attractive a figure, and at the published price are excellent value.

Large, Small, Medium
Plain and Magnifying

Each Mirror in neat Carton, **25c.** each

Ash's Plain Metal Handle =====Mirrors=====

To those Dentists who desire
a FIXED HANDLE Mirror
of an inexpensive grade, we
offer these glasses.

The sale for them has been
very large and the satisfact-
ion given is very gratifying.

LARGE, SMALL,
MEDIUM

PLAIN and MAGNIFYING

30 Cents Each.

Claudius Ash, Sons & Co., Limited

Ash's First Quality Mirrors



Ash's Mirrors, Fig. 54 C
have for years been the

WORLD'S STANDARD

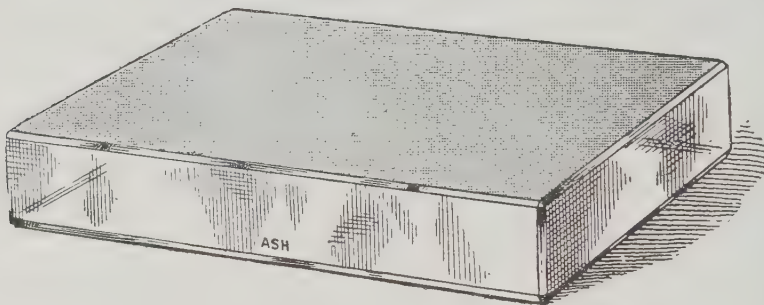
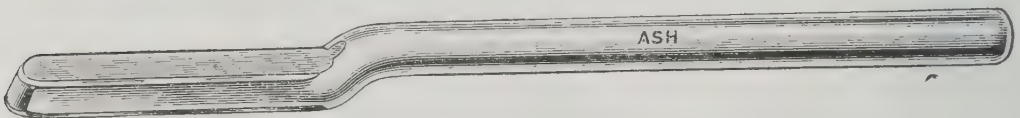
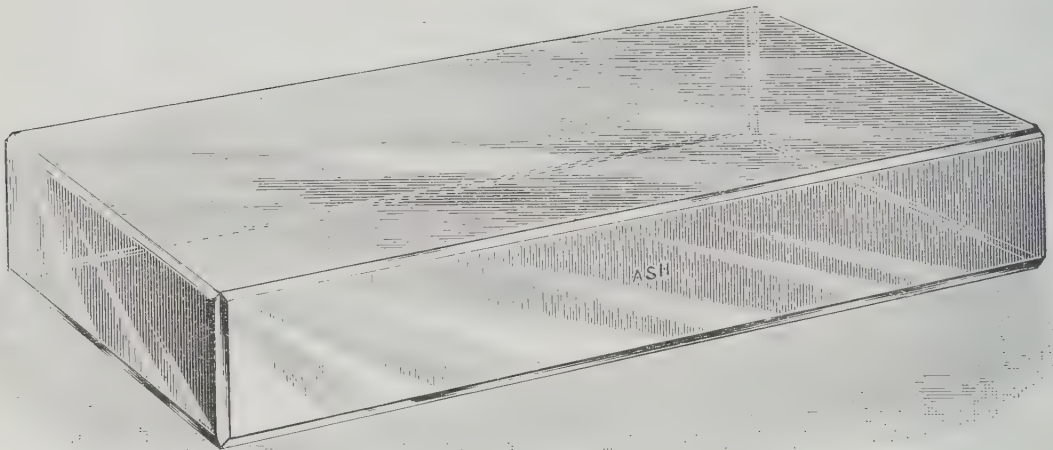
The lenses used in these
instruments are the best
possible and they are
mounted on the best of
handles.

LARGE — SMALL —
MEDIUM

Plain and Magnifying
90 Cents

Ash's Large Glass Blocks

Suitable for Use in Mixing of Dental Cements



The width of these Blocks admits of their being firmly held with one hand while the spatula is manipulated with the other ; further, the length admits of a long sweep being made backwards and forwards with the spatula, which is essential for the thorough mixing of cements, and the depth affords the Operator perfect freedom in the use of his hand without danger of grazing his knuckles on the table while working the spatula.

Supplied as under :

	Long.	Wide.	Deep.	Price.
No. 1—Block about	$5\frac{1}{4}$ inches	by $2\frac{3}{4}$	by $\frac{7}{8}$	.75
“ 2— “ “	$4\frac{1}{4}$	“ “	$2\frac{1}{2}$ “ $\frac{5}{8}$	.50
“ 3— “ “	$4\frac{1}{8}$	“ “	$2\frac{5}{8}$ “ $\frac{7}{8}$ ground one side..	.50

No. 3 is a useful all-round Mixing Block.

PRACTISES FOR SALE AND HELP WANTED

FOR SALE—Dental Practice, Walkerton, Ont. Apply Dr. F. Hughes, Waterloo, Ont.

FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350

FOR SALE—Toronto City Practice. Apply Ash & Sons 400

WANTED—Graduate Assistant. Queensland. Good position,

SECOND-HAND GOODS

1 Lathe Head. Good condition	}	-	-	-	-	-	-	-	\$ 8
1 S.S. White Engine Base with Upright		-	-	-	-	-	-	-	
1 S.S W. Pattern Chair, Leg Base		-	-	-	-	-	-	-	30
1 Case Harvard Chair		-	-	-	-	-	-	-	20
1 Special Golden Oak Cabinet with Mirror and Medicine Top, practically new		-	-	-	-	-	-	-	60
1 Davis Gasometer, less Face Piece and Tubing, excellent condition		-	-	-	-	-	-	-	18
1 Wetherby Suction Machine (new style), in A-1 condition									25
1 Davis Gasometer	}	-	-	-	-	-	-	-	
1 Mills Centrifugal Casting Outfit		-	-	-	-	-	-	-	25
1 Olivian Swager									
1 Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler		-	-	-	-	-	-	-	12
1 S.S.W. Leg Base Oil Chair	}	-	-	-	-	-	-	-	
1 Golden Oak Clark Cabinet		-	-	-	-	-	-	-	75
1 S.S.W. Metal Fountain Cuspidor									
1 Golden Oak Clark Cabinet		-	-	-	-	-	-	-	25
1 Large G. O. Cabinet. A-1 condition. A bargain		-	-	-	-	-	-	-	60
shape		-	-	-	-	-	-	-	55
1 Ash Britannia Chair. Leather upholstery. A-1 mechanism									100
1 Electro Dental Engine, Register All Cord, good condition.									
220Resistance Plates to reduce to 11 C.V. Price includes Direct H.P. and R. Angle. Good condition		-	-	-	-	-	-	-	60
1 Davis Vulcanizer. Good condition		-	-	-	-	-	-	-	10

Claudius Ash, Sons & Co., Limited

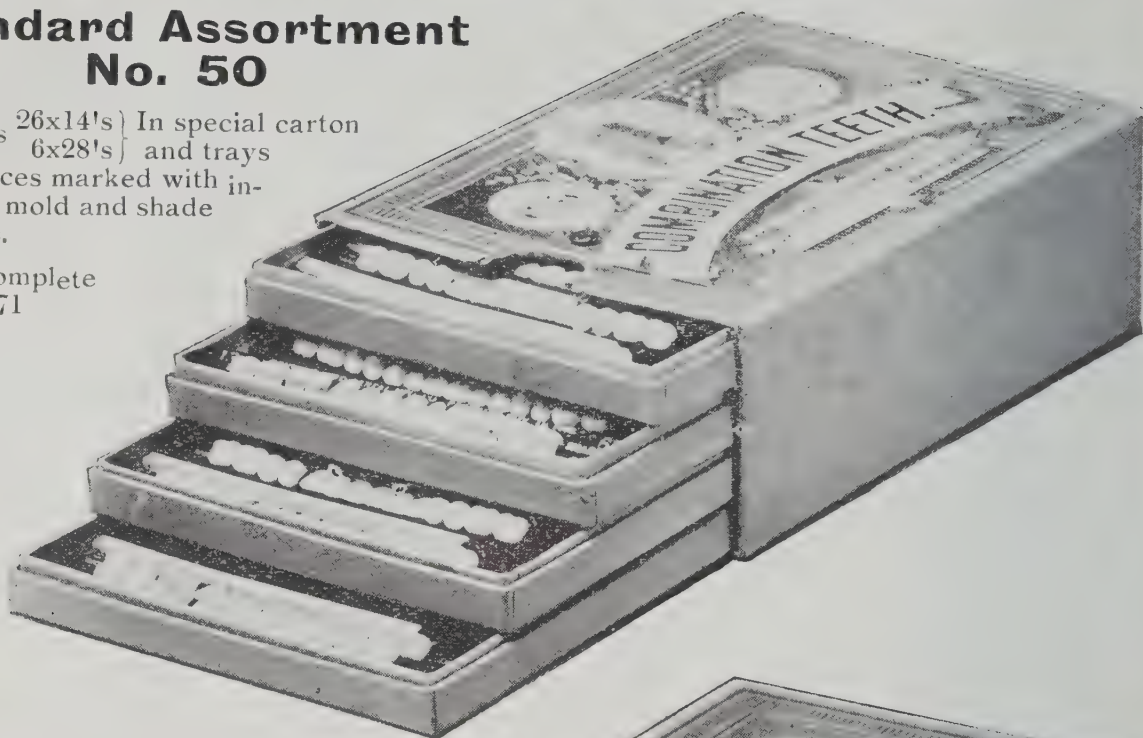
Combination Teeth

Standard Assortment No. 50

Contains $\left. \begin{matrix} 26 \times 14's \\ 6 \times 28's \end{matrix} \right\}$ In special carton
with spaces marked with in-
dividual mold and shade
numbers.

Price Complete
\$52.71

Single
set price
\$55.48



Standard Assortment No. 100

Contains $\left. \begin{matrix} 57 \times 14's \\ 12 \times 28's \end{matrix} \right\}$ In special
trays. Each set of teeth has
its own partitioned space
marked with mold and
shade number.

Price complete,
\$106.44

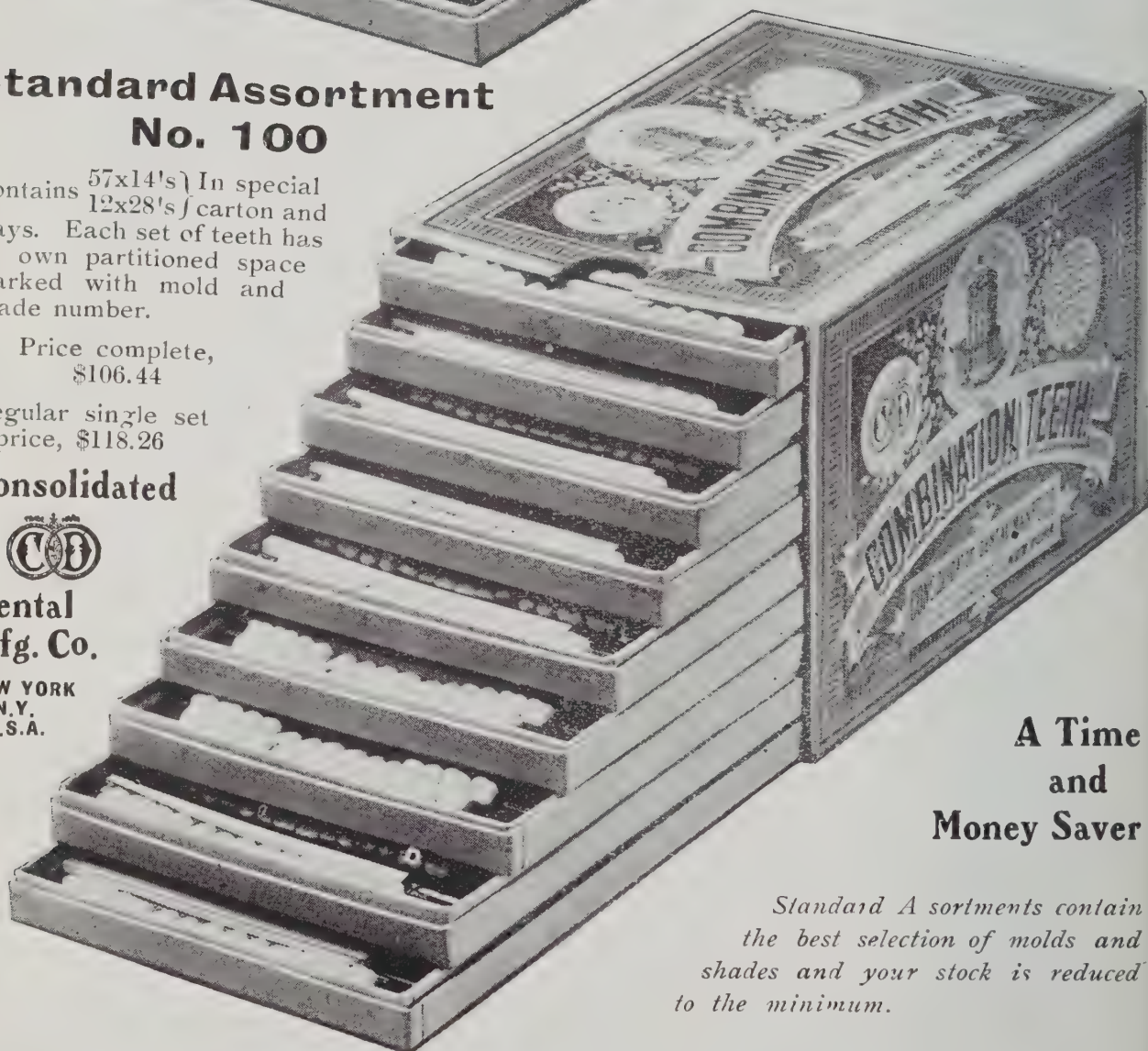
Regular single set
price, \$118.26

Consolidated



**Dental
Mfg. Co.**

NEW YORK
N.Y.
U.S.A.



**A Time
and
Money Saver**

*Standard A assortments contain
the best selection of molds and
shades and your stock is reduced
to the minimum.*

Specialists in removable and semi-removable bridge work.

Griswold, Morgan, Roach Bennett Bar, Fossum semi-removable and Gilmore attachments

Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

Ash's Swaged Vulcanite Dentures, Bar Lowers, etc.

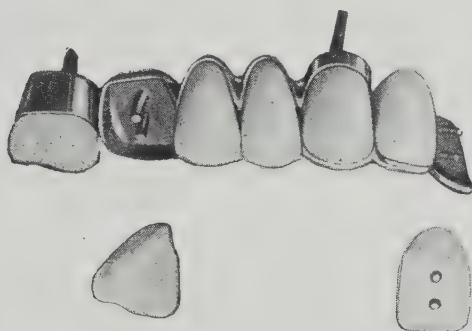
Chas. L. Daly

X. L. C. R. Dental Laboratory

ROOMS, 1, 2, 3, 4 & 5,
11 GRENVILLE STREET
— TORONTO —

"Your impression **OF** me will largely depend upon your impression **TO** me."— C. L. Daly.

"Send good Plaster Impressions and correct wax bite and leave the rest to me."— C. L. Daly



The above cut illustrates the Dimelow Detachable Facings at \$2.75 per Tooth, all porcelain posteriors

PARTIAL PRICE LIST FOR LABORATORY WORK:

Gold Crowns : Cen. Lat. Cus.	
and Bic. - - - -	\$2.00
Molars - - - -	\$2.25 to \$2.50
Bridgework : Anteriors per tooth	\$2.00
Bicuspid - - - -	\$2.50
Molars - - - -	\$3.00 to \$3.50
Richmonds, extra - - -	\$.25
Facings charged extra at market price.	
Steeles and Dimelow interchangeable Facing and Porcelain	
Cusp. posteriors, per tooth	\$2.75
Richmonds, extra - - -	.25
Gold Cusps. on posteriors extra	.50
Facings included in above prices	
Goslee and Dowel Bridgework	
per tooth - - - -	3.00
Teeth extra	

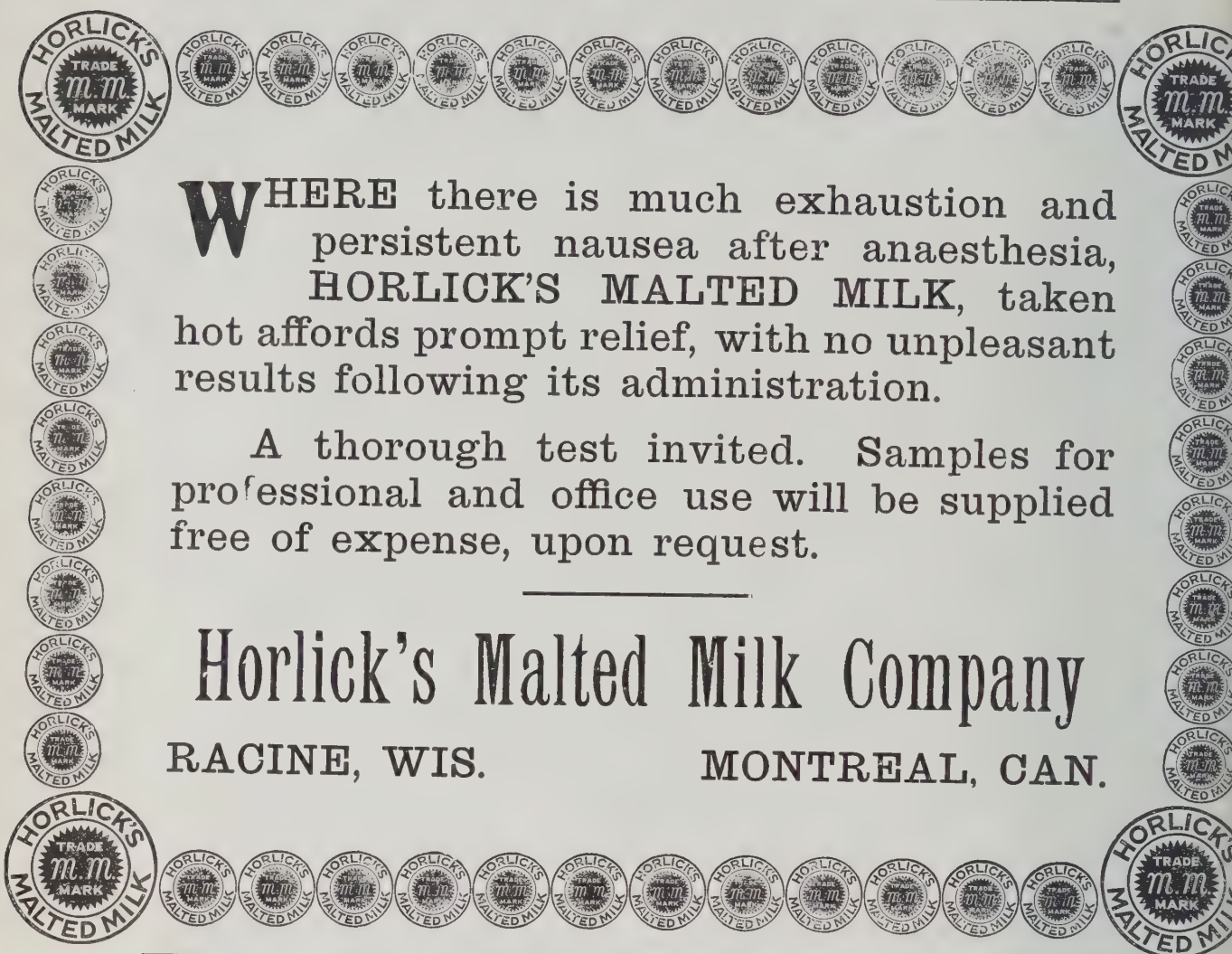
Gold Inlays	
(Send wax impression packed in tissue paper)	
Casting only - - - -	.75
Gold - - - -	.05 per gr.
Rubber Dentures—	
Plate Work, \$2.50 to \$3.00	
(Partials \$2 00)	
Swaging metal plates (swaging only)	
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All teeth charged extra at market price	
Send impressions (unpoured) plaster preferred, for all classes of work including metal work.	

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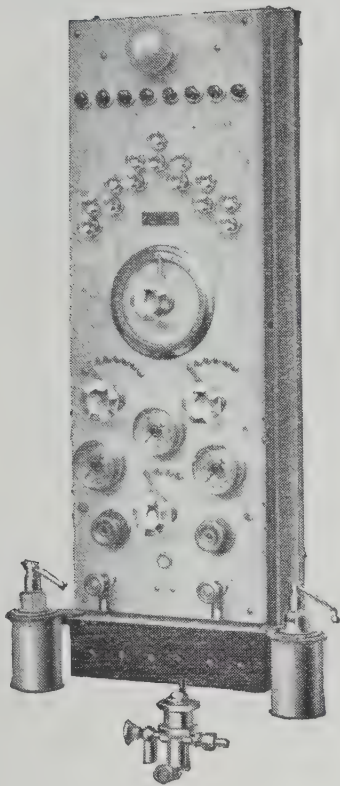
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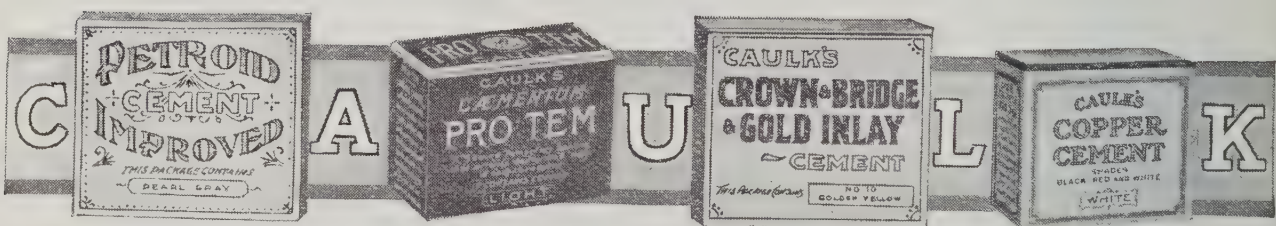
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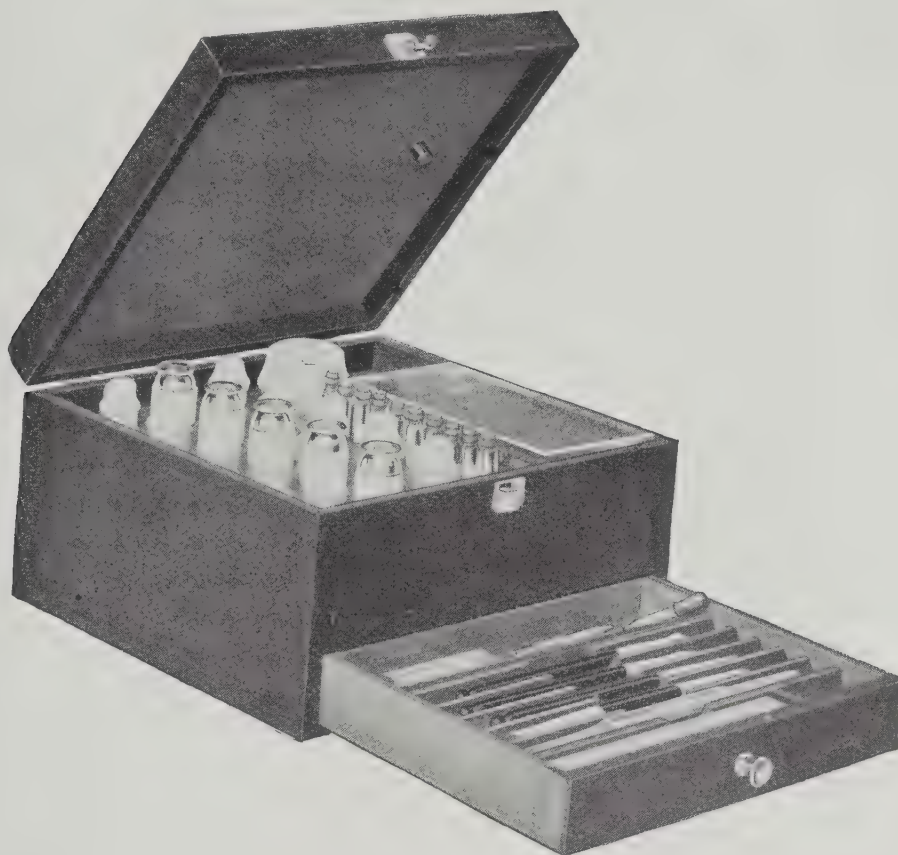


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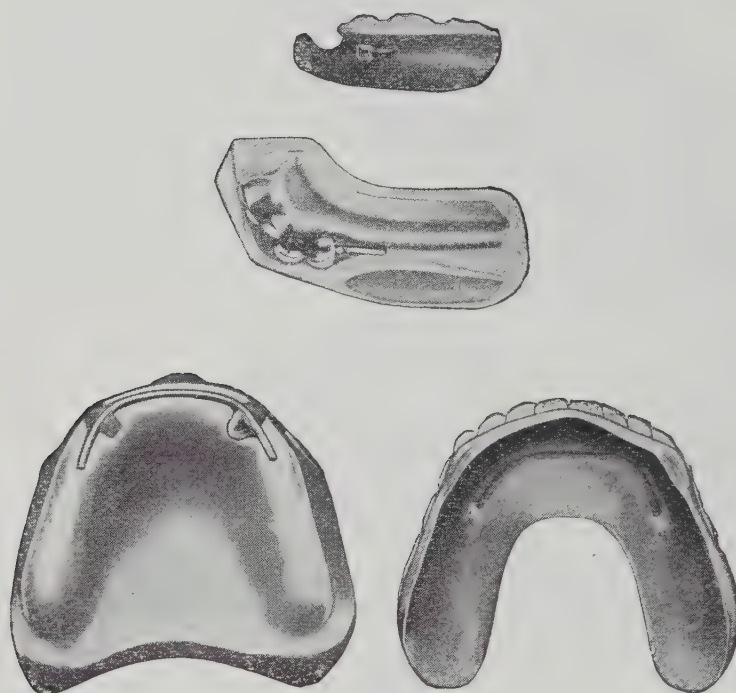
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Oral Prophylactic is exactly **Pyorrhocide**
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BECAUSE Pyorrhocide is economical to the patient, a \$1.00 can outlasting the quantity of ordinary pastes and powders obtainable for the same amount.

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It will pay you.

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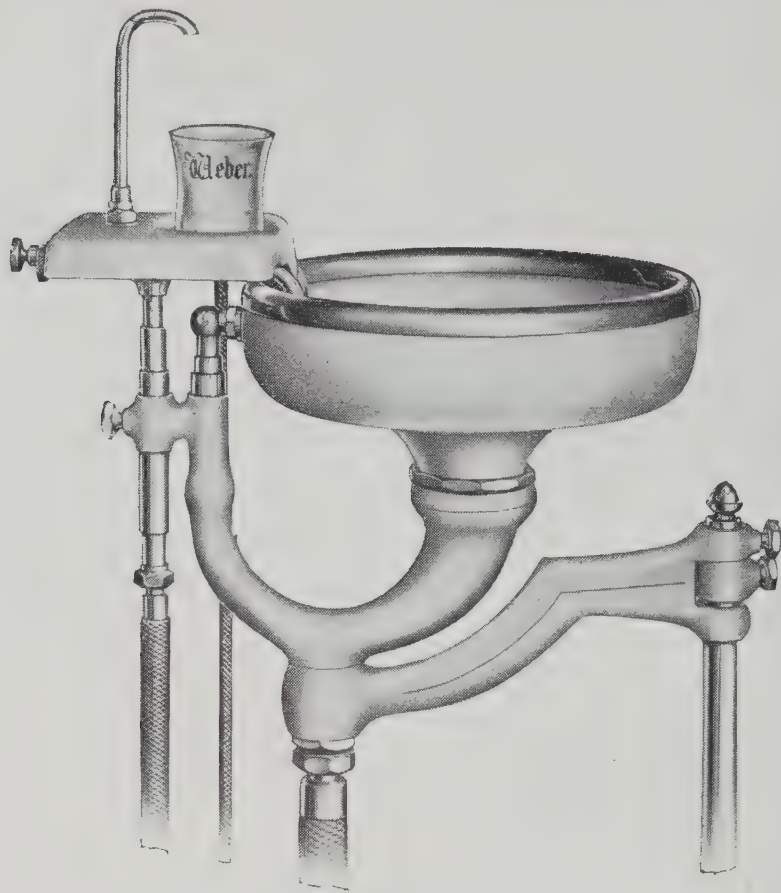
Some of the most discriminating men in the Dental Profession have been using Fellowship Crown-Bridge and Inlay Cement continuously for the past four years—THERE ARE REASONS FOR IT—and one of them, as told us recently in a letter, is the fineness of the powder.

The Doctor writes that he can get a closer adaptation, can set a better fitting inlay or crown with it than with any he has ever used.

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Fellowship Crown-Bridge and Inlay Cement is the Strongest, Stickiest Cement ever manufactured.

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The Most Beautiful and Substantial Cuspidor Made.

NEW PATENTED FEATURE: A Pearl Opal Glass valve shield and drip-cup combined; covering metal side-valves and eliminating the necessity of polishing and cleaning.

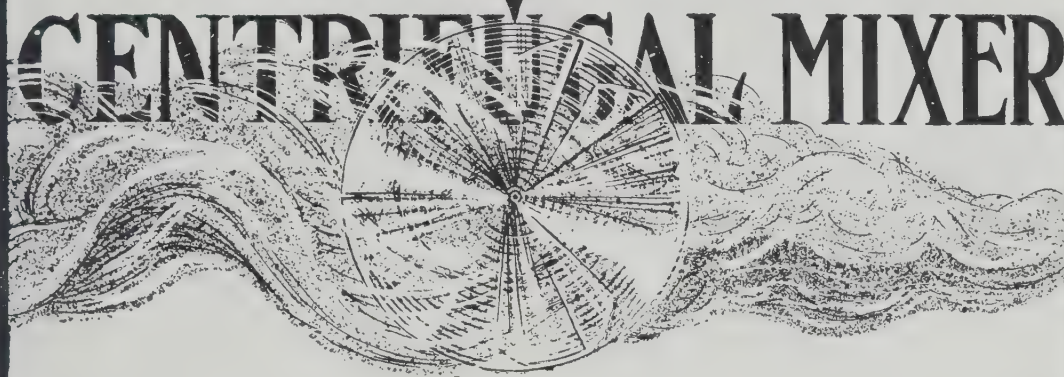
THE BLOWN LEAD Glass Bowls can be used either with or without the metal rim, and are furnished in a variety of beautiful colors.

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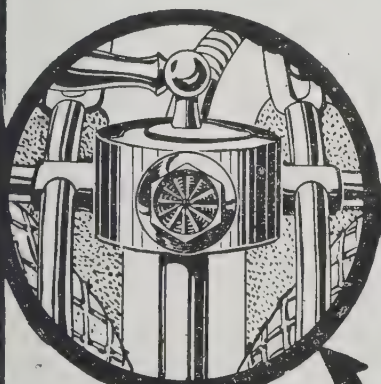


¶ The new device on the Clark Mixing Chamber that makes the Clark System of mixing N_2O & O the only **thorough** method for perfect, tranquil Analgesia and Anaesthesia.

¶ A Valuable Accessory which can be attached in an instant to your Clark Apparatus. Mailed thru your dealer for a nominal sum.

¶ The **One Handle** controls the proportions of the gases entering the Mixing Chamber where the scientific Centrifugal Mixer combines them into the desired formula.

¶ Administers the gases in positive combination (not alternations) thereby eliminating excitement, hilarity, nausea, etc.



Centrifugal Mixer as viewed from exterior. (Each Mixer constructed with a glass window revealing action in mixing chamber.)

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more fully illustrating
Centrifugal Mixers*

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Centrifugal Mixer as seen in the interior. Set in motion by a slight current. (Note its attachment at plug end of chamber.)

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Any Gauge Nos. 14, 15, 16, 17, 18, 19.

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20K Dark or Light.....	\$0.98 dwt.	\$0.93 dwt.	\$0.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.

NEY'S GOLD NUGGETS.

In 1, 1½, 2 and 5 dwts.

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18K Dark or Light.....	.90 dwt.	.85 dwt.	.83 dwt.
20K Dark or Light.....	.98 dwt.	.93 dwt.	.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.
Far Superior Non-Shrinkable.....	1.35 dwt.	1.30 dwt.	1.25 dwt.

NEY'S GOLD PLATE.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
10K Dark or Light.....	\$0.58 dwt.	\$0.53 dwt.	\$0.51 dwt.
12K Dark or Light.....	.66 dwt.	.61 dwt.	.59 dwt.
14K Dark or Light.....	.75 dwt.	.70 dwt.	.69 dwt.
16K Dark or Light.....	.85 dwt.	.80 dwt.	.79 dwt.
18K Dark or Light.....	.89 dwt.	.84 dwt.	.83 dwt.
20K Dark or Light.....	.97 dwt.	.92 dwt.	.91 dwt.
21K Dark or Light.....	1.03 dwt.	.98 dwt.	.97 dwt.
Coin	1.04 dwt.	.99 dwt.	.98 dwt.
22K Dark or Light.....	1.05 dwt.	1.00 dwt.	.99 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.14 dwt.	1.09 dwt.	1.08 dwt.
Clasp Plate	1.30 dwt.	1.25 dwt.	1.20 dwt.
Green Gold for backing.....	1.03 dwt.	.98 dwt.	.95 dwt.
Virgin	1.35 dwt.	1.30 dwt.	1.25 dwt.
24K Matrix (.003 thick).....	1.20 dwt.	1.15 dwt.	1.12 dwt.

Crown metal, Gold on one side, Platinum on the other.

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The above Gold Plates furnished in sheet or put up in envelopes. Plates cut to pattern, slight additional charge.

The above quantity rates may be allowed on 20 dwt. and 100 dwt. assorted lots, each item being charged at its respective rate.

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Main Office and Factory:

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In sending your mail orders to Ash & Sons, the choice of materials is greater than can be offered you by any other house in Canada. The products of our own numerous factories, covering almost every conceivable article used in dentistry, gives those of you who desire to patronize British-made goods and keep your money within the Empire, the certainty of securing good service to yourselves and with it the satisfaction of subscribing to the business principles of trading within the Empire. Should our Canadian Depot be too far away to send your mail orders to us direct, the same result may be achieved by specifying Ash's manufacture when ordering from your local dealer.

In addition to our own manufacture, we stock the following lines of goods and thereby insure the largest selection:—

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H. D. Justi & Sons Teeth.

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Pelton & Crane products.

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And many other lines of merit.

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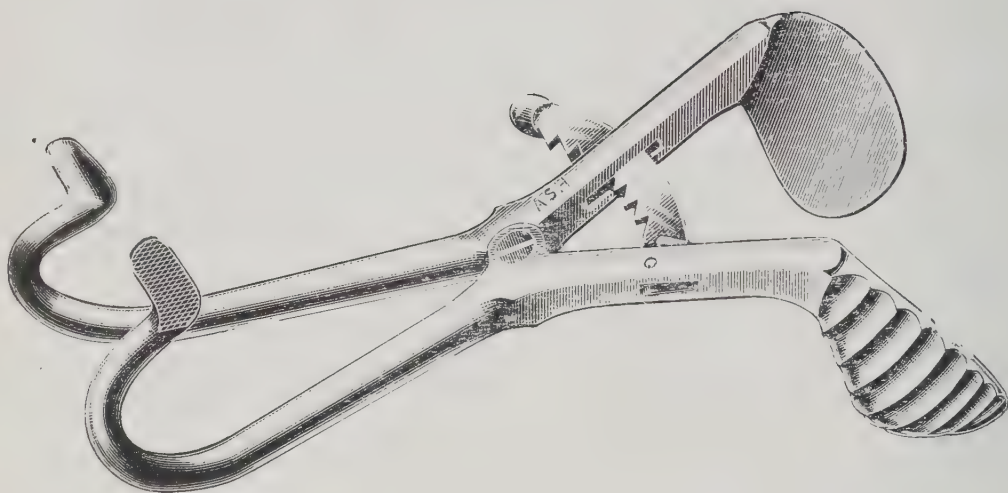
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MAIN DEPOT

LONDON, W. ENGLAND.



BUXTON'S GAG



¶ This gag has long been the premier article of its kind.

¶ In addition to being a perfect gag, it is most useful as a mouth opener, the beaks being so constructed that one falls below the other, and they can be forced between the upper and lower teeth.

PRICE . . \$4.50

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APRIL, 1914

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“Who is the honest man?
He that doth still and strongly good pursue,
To God, his neighbour, and himself most true;
Whom neither price nor fawning can
Unpin, or wrench, from giving all their due.”

—*George Herbert.*

Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, APRIL 1, 1914

No. 10

THE VIOLET RAY HIGH FREQUENCY CURRENT IN DENTISTRY.

By MILTON D. NEFF, D.D.S., Cleveland, O.

Reprinted from The Dental Brief, November, 1913.

This introductory article presents a general application of the dental use of the violet ray produced by the high frequency current. There will be no attempt to compare physical effects with psychic influences. It is a statement of what this feature of the fifth medical current will do for some patients; a report of the results obtained by those who have employed the high frequency current.

The effects of the rays are anodyne, sedative, stimulative and germicidal to a degree. Affections that are difficult for the dentist to reach may readily be benefited by the penetrating power of this peculiar kind of electric current. The reader must not confuse this violet ray produced by the high frequency current with the many other violet rays which are now exploited, but which are not of high frequency.

It is worthy of consideration for the relief of toothache from whatever cause. In 1904 Monell (a recognized authority on electro-therapy) described its anodyne and sedative action for allaying toothache. It is now the practice in some offices when a patient is suffering from an aching tooth, and awaiting his turn for attention, to have an assistant give the patient a treatment with the violet ray. The writer has observed scarcely any cases that were not quickly relieved. On occasions it has been the only attention accorded until a regular appointment. It must be realized that from whatever cause the odontalgia arises the nerves become irritated. Though it is of secondary consideration to the dentist, the pain—however small—is of first importance to the patient, and must be allayed. If the dentist cannot give immediate attention to the patient, it is unnecessary for him to continue suffering, for the assistant can give relief by applying the violet ray of high frequency. A case of this day will illustrate:

A young lady of thirty years, of slight build, aenemic, with teeth in bad condition, crying convulsively with toothache in an upper molar, pain extending throughout the upper branches of the trifacial nerve. Not being at liberty to give her immediate attention, my assistant treated her with the violet ray.

The assistant first demonstrated the action of the current upon herself, then had the patient hold the electrode in palm of the hand for a few moments, so that a general sedative effect was induced upon the whole nervous system—finally passing the surface electrode over the aching area of the face for several minutes. In the case cited it was necessary to alternate between the face and hands for fifteen minutes. I know I could have done nothing else but give her a general anaesthetic; in fact, she had been brought to me for “extraction with gas.” She came to the chair, as she said, “a different woman—absolutely no toothache and nervousness entirely gone.” Upon excavation I found the pulp exposed; it bled slightly, but without causing pain, so that I placed an arsenic dressing.

It is often most effective to use a small electrode inside the mouth directly over the apices of the roots. There are several electrodes, some of which have a concavity to hold an anodyne or counter-irritant medicament, so that this current passing through it will drive the medicament into the tissue without decomposition. This feature opens up a big field for humanitarian dentistry, with the possibility of obtunding sensitive dentine. It is just as feasible to think of driving a cocaine solution through this as other tissue, providing you have the kind of current that will do it properly.

Touching the subject of neuralgia, let me quote a neighbor physician, who states on long experience that the teeth are responsible for most facial neuralgia. It is quite within the jurisdiction of the dental surgeon to allay facial neuralgia, whether or not he can lay the blame for it on the teeth. More than once it has been impossible to locate the offending tooth at first, and the violet ray bridges over the time in comparative comfort till other evidences presented which made the diagnosis certain. Such cases are notably where the pulp is dying under crown or filling, or where a pulp-stone is present. Some remarkable instances will be presented later in the paper on this particular subject.

Pyorrhœa is granted to be about the most subtle dental affection we are called upon to handle. Many have secured good results in using certain medicaments in conjunction with instrumentation. Some will state the value of daily massage by the patient using an ointment. Mouth washes galore are advocated to be almost specifics, and yet the White Plague of Dentistry stalks through the land, causing an alarming increase of devastation. Don't give up any of the good methods of treatment, but

use the high frequency current besides, for its stimulating, vitalizing effect upon the weakened tissues. It will relieve soreness and dispel that disagreeable taste which the worst sufferers testify is most nauseating.

Do not get the idea that any one claims that the high frequency current is a panacea for all human ailments. But it certainly is a tonic to the weak and a corrective in many cases beyond other reach.

Abscess (blind and fistulous): Have you ever heard of anything that will dispel abscess other than nature, aided by medications, either in homeopathic doses, to reach the circulation as medium of dispelling, or as counter-irritation, to perfect circulation in the affected part? This high frequency current generates ozone and drives it into the tissue. It is at once germicidal, and stimulative to healthy tissue. It does the work which the white blood corpuscles strive to do single-handed.

Take, for instance, a porcelain doweled tooth, with apical pericementitis setting in. When external treatments have not corrected it, the only recourse has been removal of the crown and post, or in cases where the X-ray has shown conditions granted to warrant the practice, room amputation has been the order of the day.

I refrain from much personal reference to this subject of oral surgery, but my conscience bids me confess that I had become quite as unconcerned in the measure of root amputation as one would be in filling teeth.

Comparison is the weigh-master of our human economy, and but for the sake of comparison I would not feel called upon to make such a bland statement as just recorded, for now I want to testify that I have not cut once for this trouble since I have been employing this high frequency current. I wish I could go into detail now on this important and inaccessible trouble. The fistulous abscess is simpler to handle, and will later be shown to respond to the corrective and stimulating action of the high frequency current.

This same benign influence of electricity is largely employed in reducing strains of all sorts throughout the body. Of special interest to the dentist is that incident to extraction, not only the lameness due to shock to adjoining teeth, but the wrenching often inflicted upon the muscles of the jaw and face.

It has been proved time and again in the writer's observance that high frequency accomplished what oils and dressings of many kinds could not quickly relieve. This electric current is particularly valuable after such heavy work as is often necessary in surgical removal of impacted lower third molars. Closely allied to this subject is that of cramps. How often do you have to stop your work because the patient is severely annoyed with

cramping of masseter or pterygoid muscles? I would cite an example of one family where the mother and every child has had this trouble severely. Now my assistant gives such patients a few minutes' facial treatment before beginning dental work. If the cramping comes on then it is quickly dispelled without delaying the work, removing the dam or other appliances.

It can be stated in broad terms that the same stimulating effects of the violet ray of high frequency are utilized in building up new tissue. It is of pertinence to the oral surgeon in particular to have at his command an agency which vitalizes dormant tissues, awakens healthy granulation and materially aids his operative work of restoring natural conditions where parts have been excised.

The old standbys of medicinal nature are not shelved at all, but quicker results than formerly were possible is the reward which high frequency carries with it. The large openings often necessitated where impacted teeth are cut away can readily be coaxed to fill up to a normal level. This is essential in order to avoid scar pockets, which foster fermentation.



DENTAL FORCEPS

The illustrations of Forceps in the following pages represent some of the most improved forms in general use, which have met with the approval of the best Operators. The upper part of each is drawn nearly full size, in order to give a clear view of the construction of the beaks. To facilitate reference, the Forceps are placed in numerical order according to the numbers by which they are known. It should be noted that the words "for the right or for the left side of the mouth," employed in some of the descriptions, means the right or left side in the patient's mouth.

We have devoted special attention to this branch of our business for more than half a century, during which time we have availed ourselves of the suggestions for new Forceps and for modifications of existing forms made by the most eminent practitioners in the Dental Profession, including the late Sir John Tomes and other Operators whose names have never been formally associated with the instruments which they designed. All our Forceps are made of the best steel, nickel-plated, and we can confidently recommend them for lightness, strength, temper, finish, and accuracy of adaptation. The beaks of each are made to fit the teeth for which they are intended so perfectly that a firm grip can be obtained and sufficient pressure applied for the removal of any tooth without danger of crushing the crown.

We carry in stock, of our own manufacture, the principal American pattern Forceps at \$2.50 each.

NOTES

During cold weather Forceps should be warmed by being placed in hot water before they are used. The best tempered steel is liable to snap during the winter months if this precaution is neglected.

All our Forceps are supplied to order in polished steel—not nickel-plated—with black handles at 25c each less than advertised prices.

Forceps, nickel-plated, can be had with the checkered parts of the handles Blacked over the Nickel at 15c each extra.

Special Forceps made to Operators' own patterns, and submitted in the rough state for approval before they are finished.

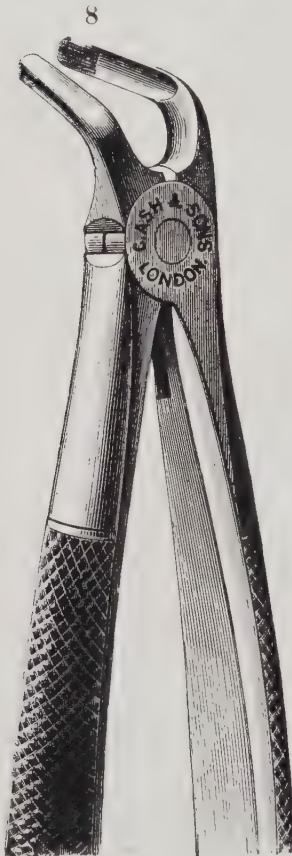
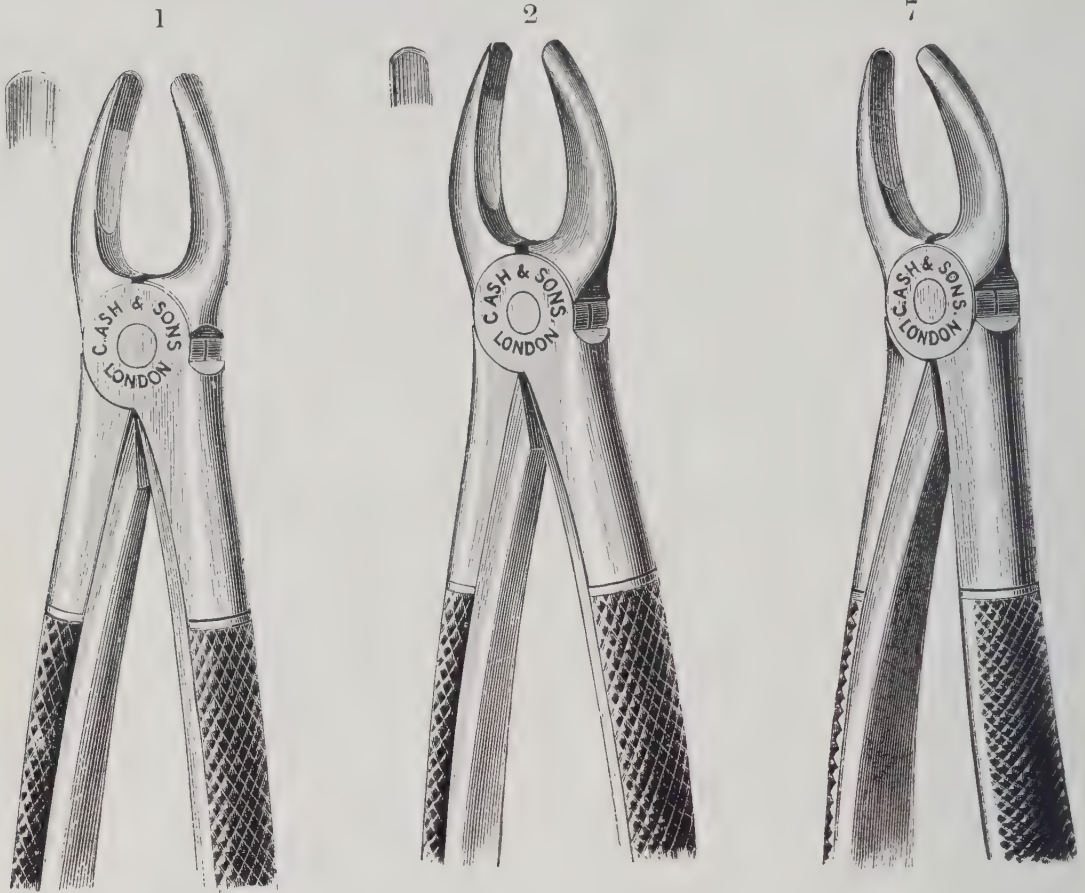
Forceps repaired, re-polished and re-plated at moderate charges.

All forms of American pattern Forceps kept in stock or made or obtained to order.

A Catalogue of our complete list of Forceps is yours for the asking.

Claudius Ash, Sons & Co., Limited

Extracting Forceps

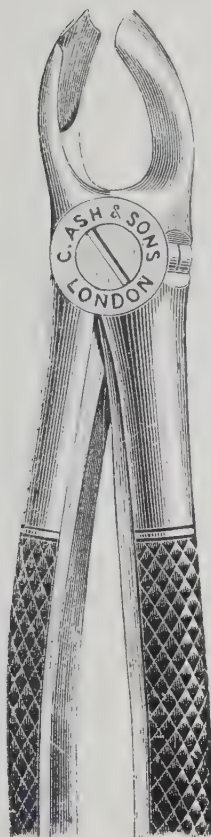


- Fig. 1. For Upper Centrals and Canines
 " 2. For Upper Laterals and Bicuspids
 " 7. For Upper Bicuspids
 " 8. For Lower Bicuspids

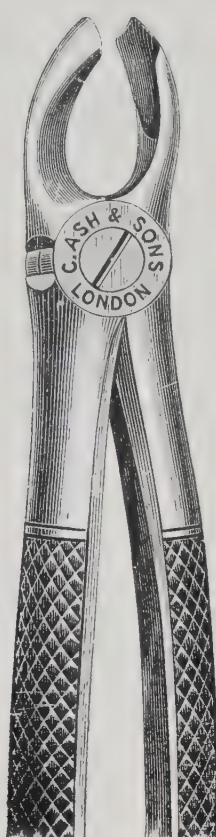
Each, Nickel-plated - \$2.50

Extracting Forceps

17



18



19



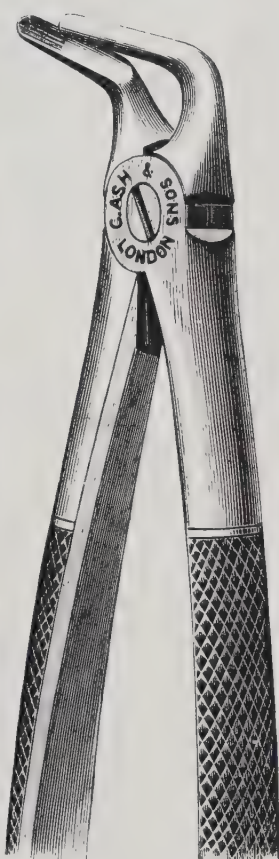
20



21



31



- Fig. 17. For Upper Right Molars
 “ 18. For Upper Left Molars
 “ 19. For Upper Wisdom Teeth
 “ 20. For Lower Wisdom Teeth
 “ 21. For Lower Molars
 “ 31. For Lower Roots.

Each . . . \$2.50

Extracting Forceps

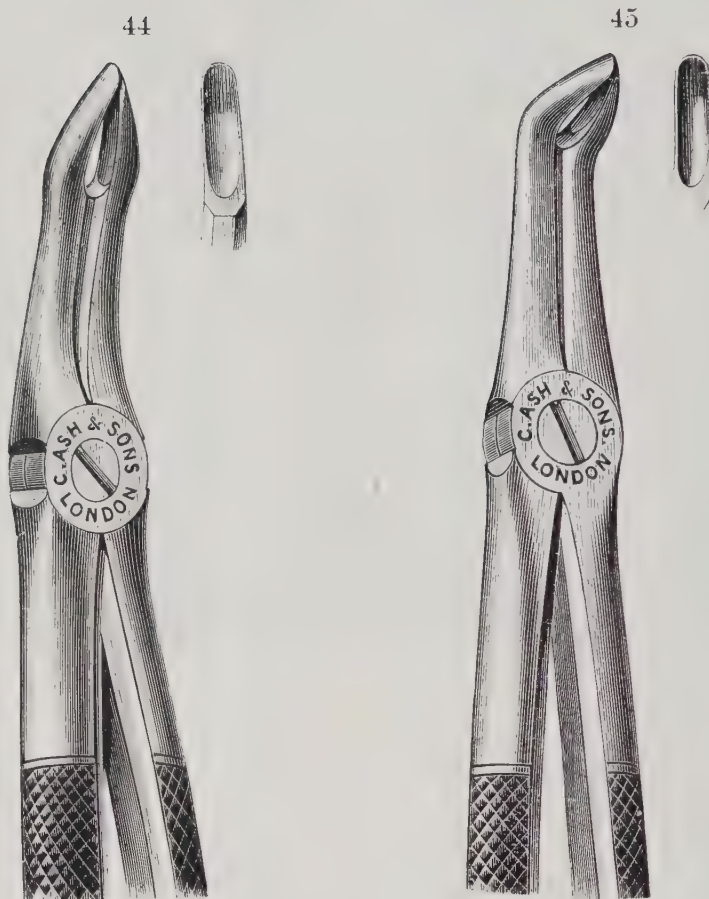


Fig. 44. For Upper Roots

“ 44 S (not illustrated. Same shape as Fig. 44, but smaller in build and with narrower beaks

“ 45. For Lower Roots

Each, Nickel-plated - - - \$2.50

Extracting and Splitting Forceps

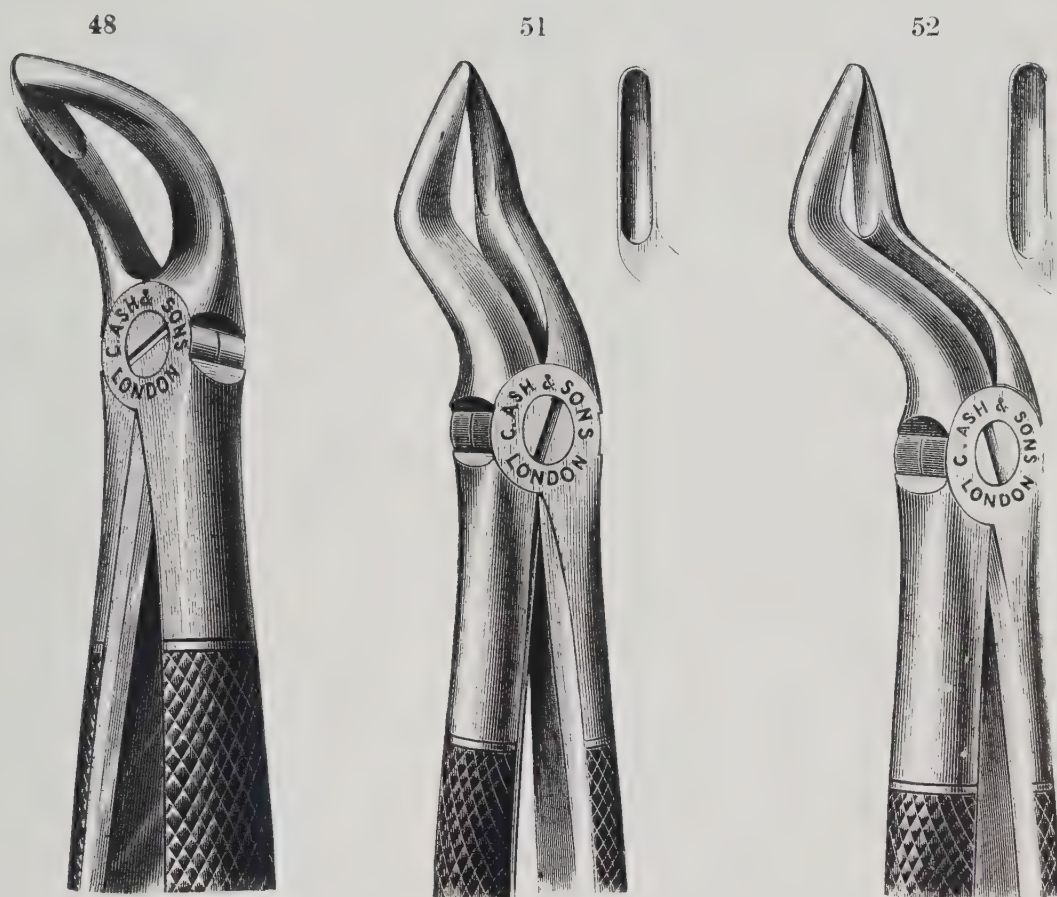
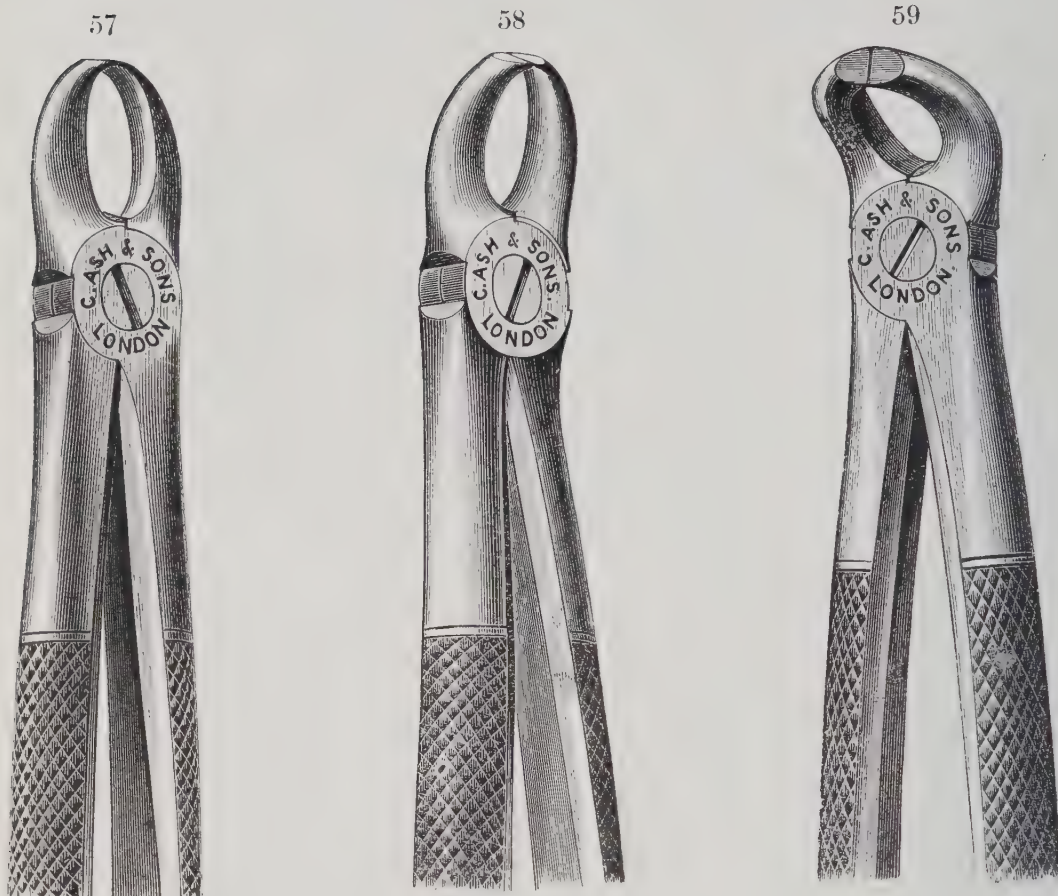


Fig. 48. For Lower Roots
“ 51. For Upper Roots
“ 52. For Upper Roots

Each - - - \$2.50

Excising Forceps



When preparing roots for pivoting, etc., it is not safe to use these excising Forceps until the portion of the tooth to be removed has been already partly cut through. Neglect of this precaution may result in the root being splintered longitudinally. — See “Tomes’ Dental Surgery,” 3rd edition, page 756.

No. 57. For excising Upper Teeth, broad, medium and narrow.

No. 58. For excising Upper Teeth, broad, medium and narrow.

No. 59. For excising Lower Teeth, broad, medium and narrow.

Each, Nickel-plated - - \$2.50

Extracting Forceps

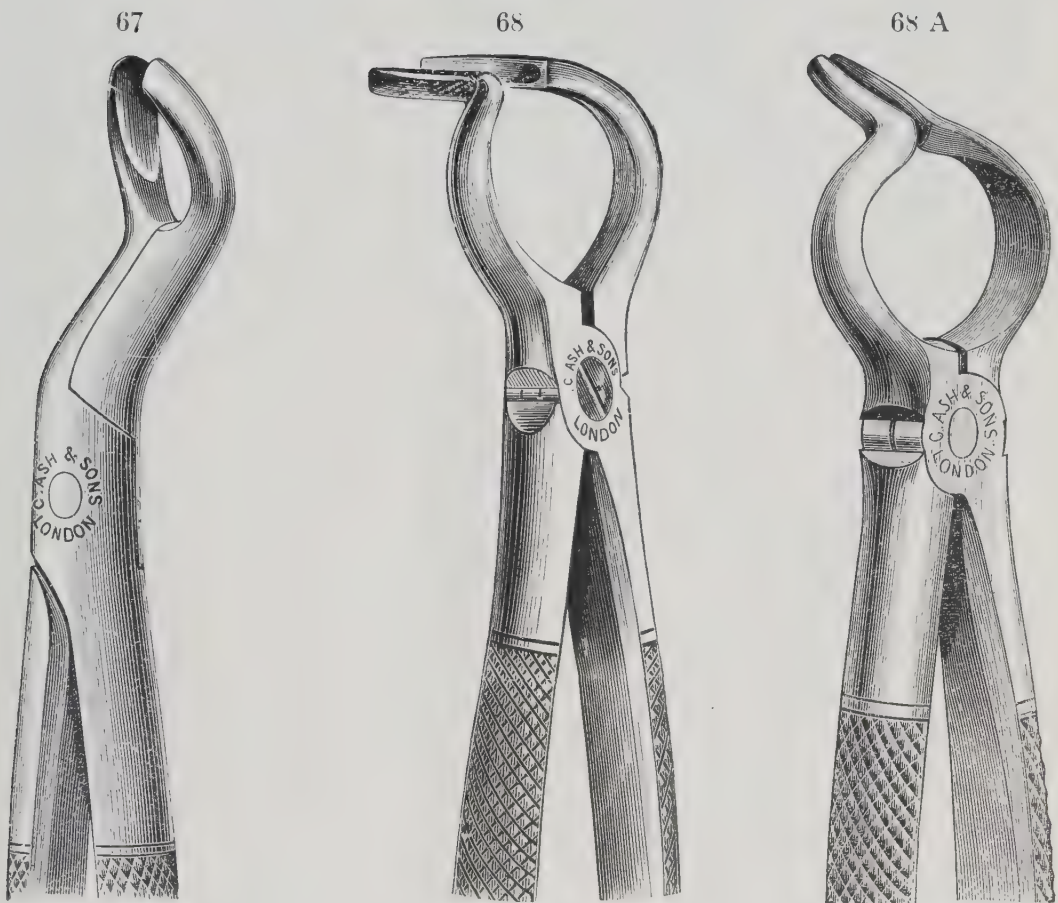


Fig. 67. For Upper Wisdom Teeth
“ 68. For Lower Roots
“ 68 A. For Lower Roots

Each - - - - \$2.50

Extracting Forceps

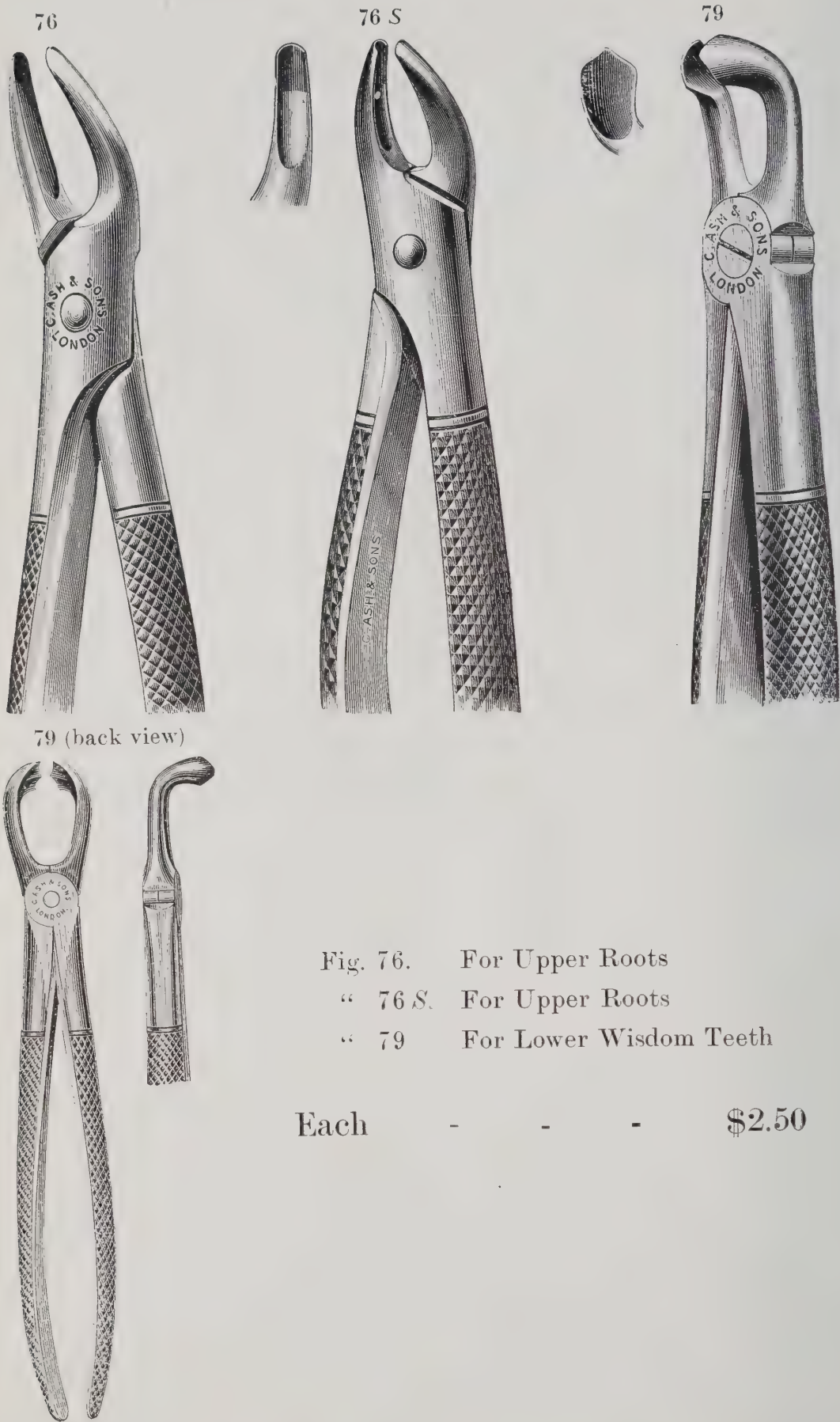


Fig. 76. For Upper Roots
 “ 76 S. For Upper Roots
 “ 79 For Lower Wisdom Teeth

Each - - - \$2.50

Extracting Forceps



Fig. 107. For Upper Canines.

This instrument is made with short powerful beaks, one of which is slightly narrower than the other, as recommended in Tomes' Dental Surgery, where it is stated, on page 492 of the fourth edition, that: "A section through the neck of an incisor of the upper jaw will show that the anterior is larger, and forms part of a greater circle, than the posterior surface. Now, the end to be attained in the application of Forceps is to apply them over as large a surface as possible, so that the pressure may be diffused and the chance of fracturing the teeth by the pressure of the instrument avoided. To extract these teeth, therefore, the jaw to be applied to the posterior surface must have a smaller curve than that for the anterior."

Each, Nickel-plated - - \$2.50 .

Extracting Forceps

(Mr. E. Thorne's for Upper Roots)

110

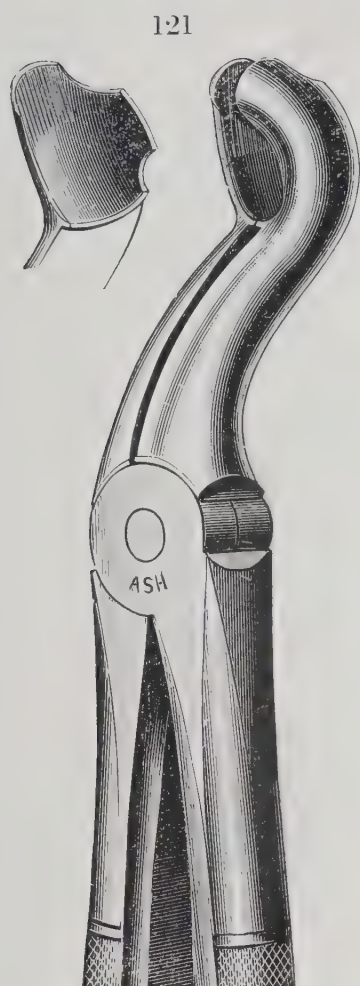


Mr. Thorne says: To those Operators who are accustomed to employ the short beaked Forceps now so popular and so extensively used, these Forceps will be found of great advantage, inasmuch as they can, on occasion, with practice, be used for extracting the roots of most teeth in the maxilla. Their use, however, is especially indicated in the extraction of upper molar roots, the bend near the beaks enabling the Operator to avoid the teeth anterior to the root to be extracted, while the bend in the handles enables him to avoid the lower lip and to prevent bruising it.

At the same time no power is lost by the introduction of these bends, owing to the beaks being parallel with the handles. This admits of the greatest possible power being transmitted to the root and of the utmost penetration being obtained.

Each, Nickel-plated - - \$3.00

Extracting Forceps



150 (With Box Joints)

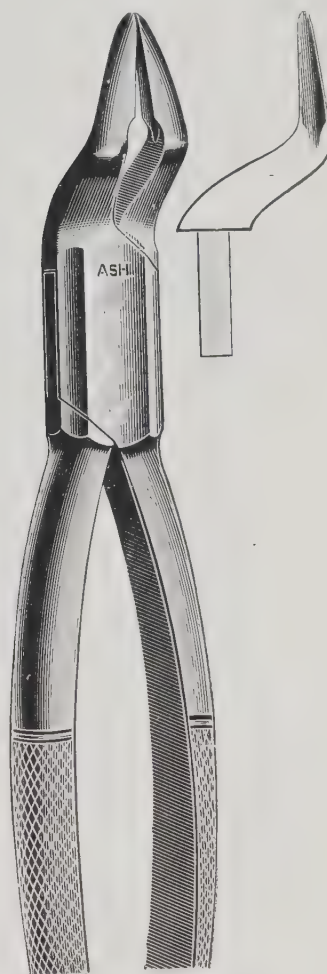


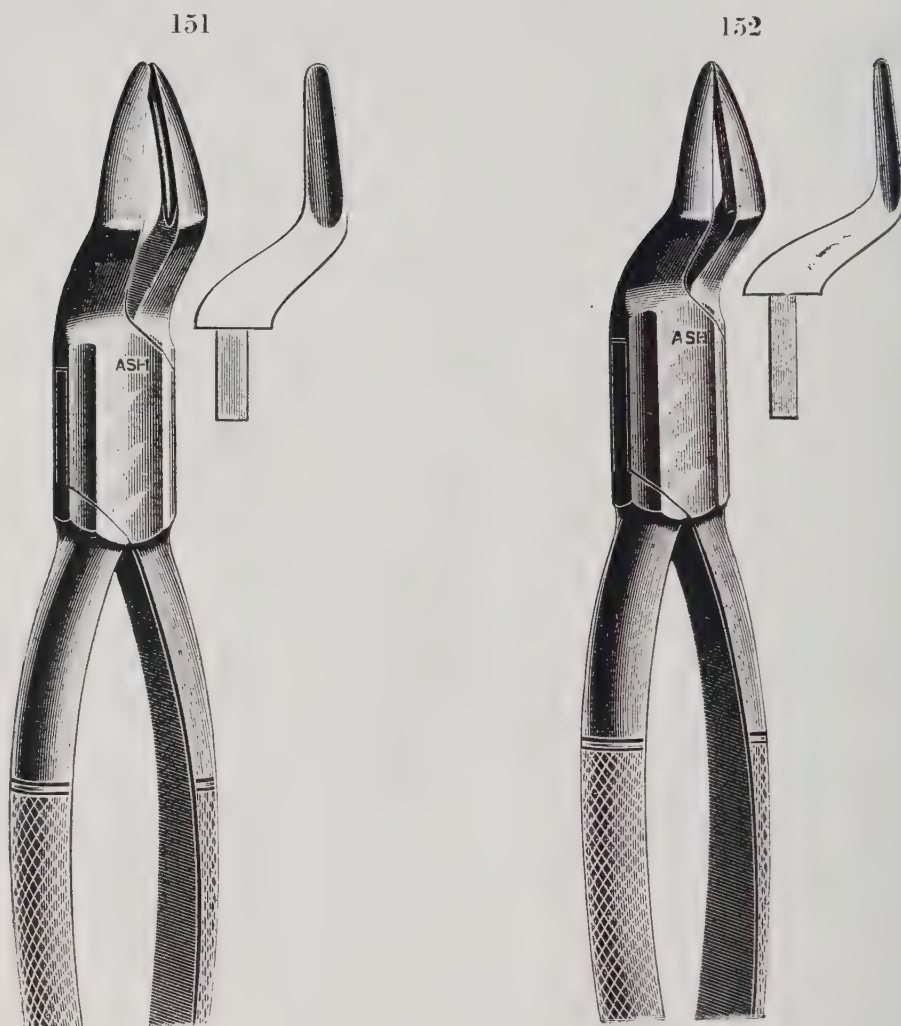
Fig. 121. Felsch's Upper Wisdom, similar in shape to our well-known Fig. 67, but with beaks so formed that they constitute a box around the tooth and prevent it slipping out of them.

Fig. 150. Alveolar, bayonet shape, small.

In Polished Steel, Nickel-plated, Figs. 121, 150
each \$2.50

Extracting Forceps

With Box Joints



(Hitherto known as Figs. 35 and 65, American pattern.)

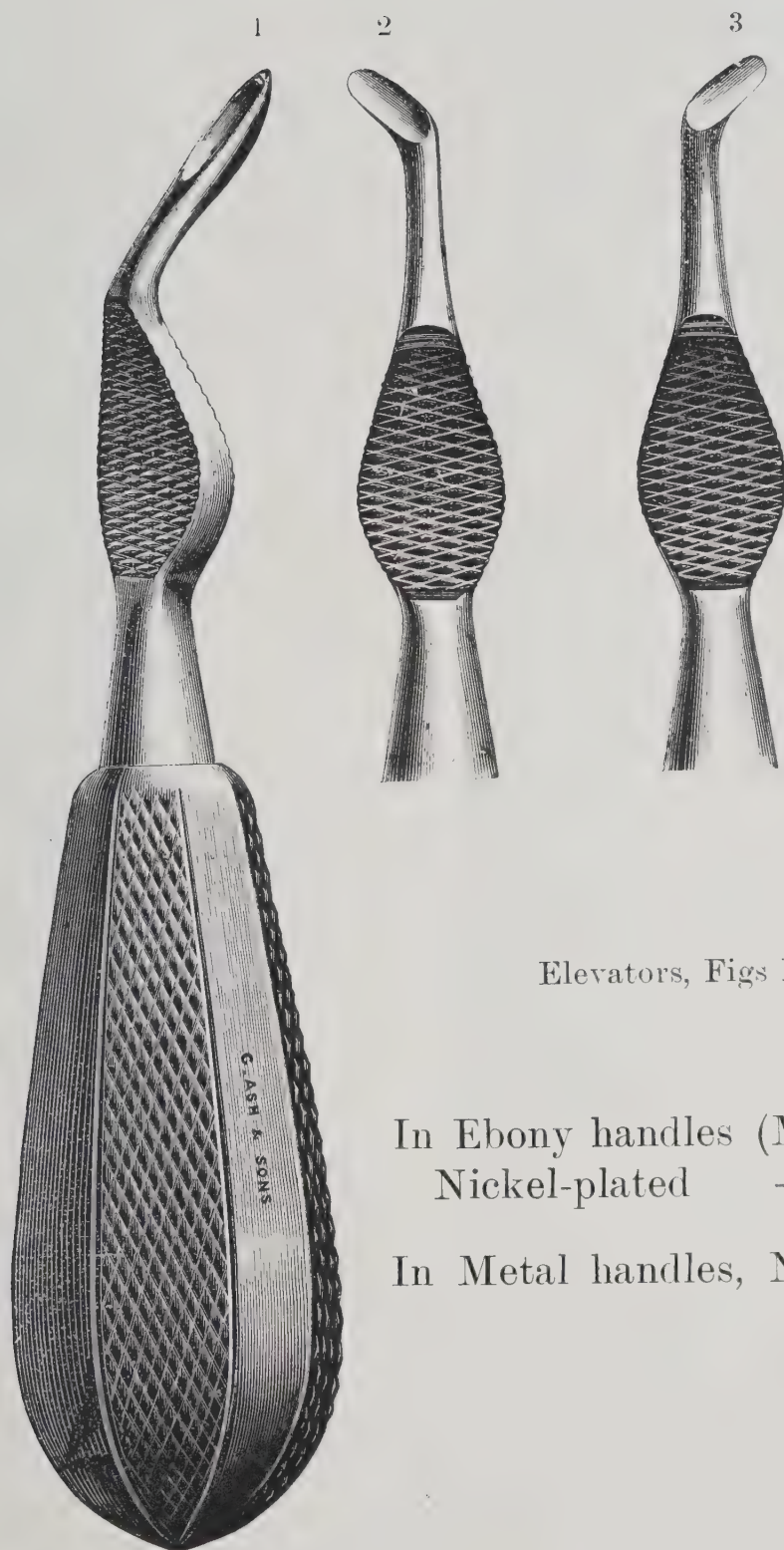
Fig. 151. For Upper Roots, bayonet shape.

Fig. 152. Dr. Arrington's, bayonet shape, with very narrow beaks for extracting difficult Roots from the maxilla, also for extracting Roots of Front Teeth in the mandible.

In Polished Steel, Nickel-plated, Figs. 151, 152
each, \$2.50

Root Elevators

Full Size



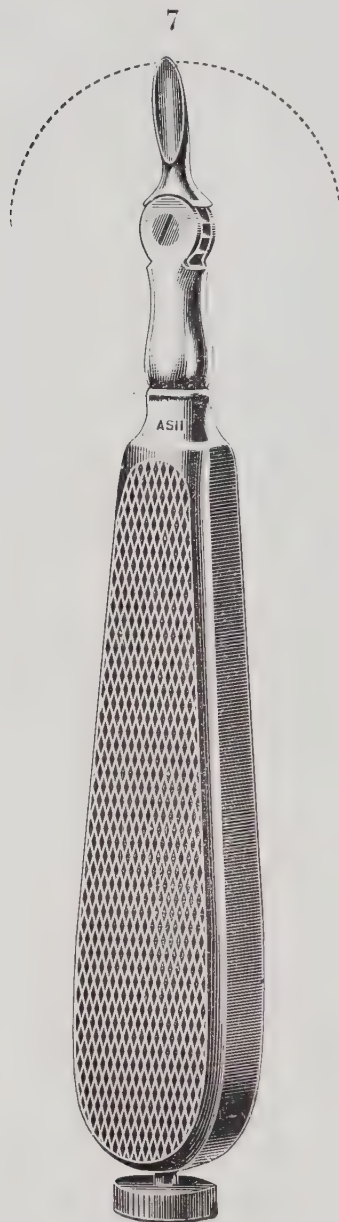
Elevators, Figs 1, 2 and 3.

In Ebony handles (Mr. Thomson's),
Nickel-plated - each \$2.00

In Metal handles, Nickel-plated
each \$2.00

Root Elevators

(Fig. 7 is two-thirds natural size)

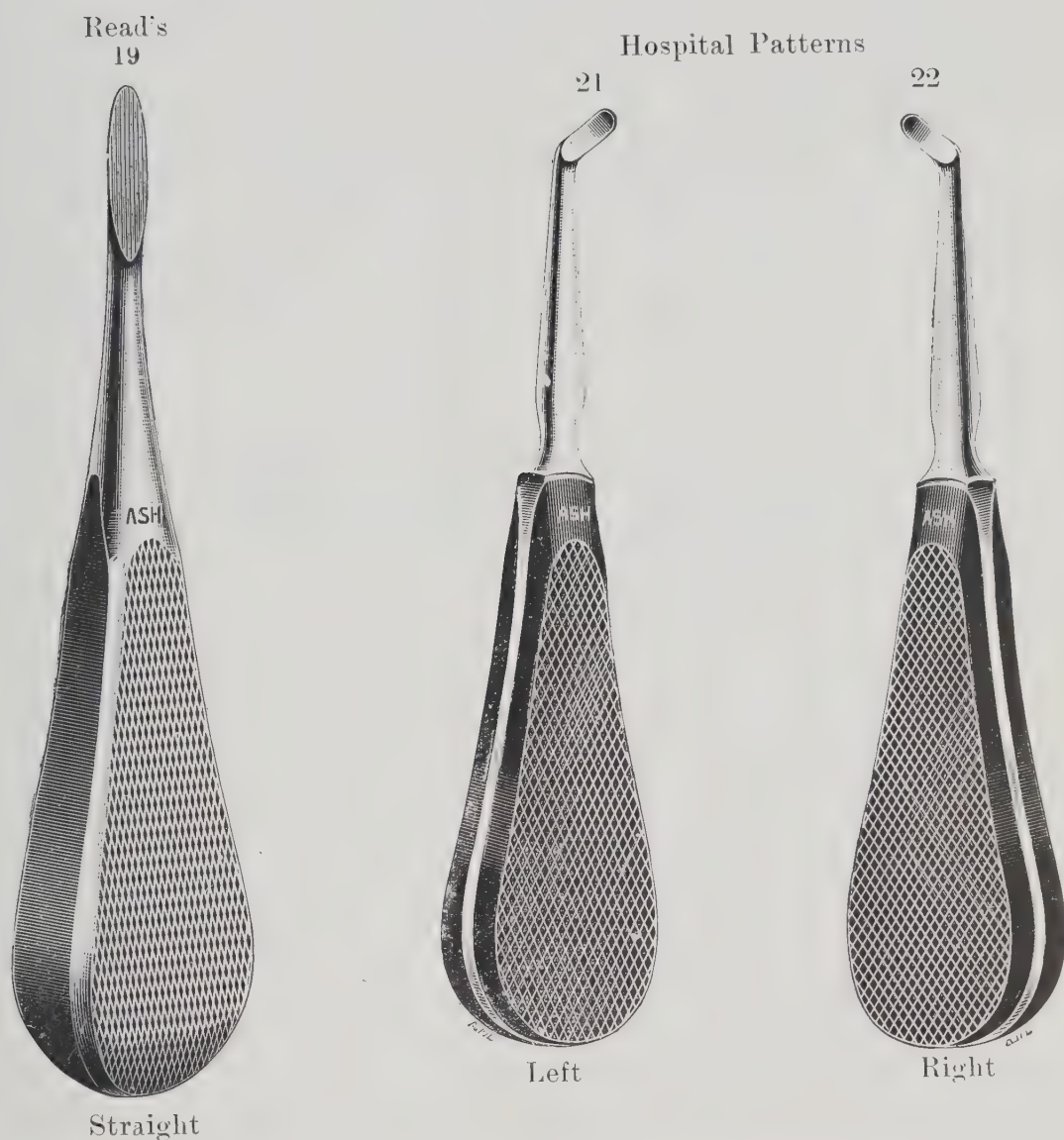


Elevator, Adjustable, in Ebony handle

- \$2.25

Root Elevators

Three-fourths size

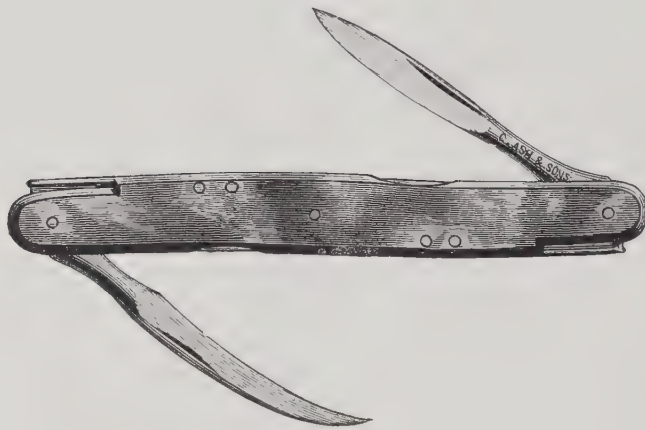


Hospital patterns with serrated blades, Read's with plain blades.

Fig. 19. Elevators, Read's pattern, in Ebony handles, each	\$1.50
Elevators, Read's pattern, in Ebony handles, the same size as Figs. 21 and 22, each	1.50
Figs. 21 and 22. Elevators, Hospital pattern, in Ebony handles, each	2.00

Any of the above can be had in Metal handles, Nickel-plated, at the prices quoted for Ebony handles.

Symes—Paget Knife



With two Blades and Spring Stops, best make.

In White Metal handle - - - each \$2.00

Other Lancets made or obtained to order.



1

Lancets for Abscesses, Etc.

Figs. 1 and 2. For opening abscesses, trimming
and smoothing filings, etc.

In Steel handles, Nickel-plated
each 30c.

Other Lancets made or obtained to order.



2

Ash's Simple Gag



Vulcanite with Soft Rubber Pads

Large, Medium, Small.

Each - - - - 40c.

Gum-Cutting Forceps

(Designed by Mr. Woodhouse)



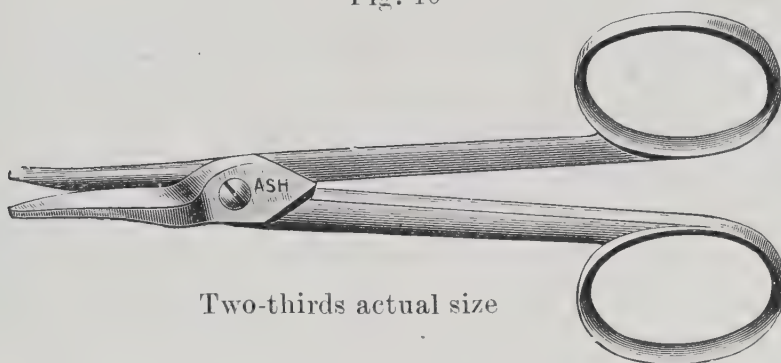
For removing gum from the masticating surfaces of partially erupted Wisdom Teeth. Before applying the Forceps, make an incision with a lancet along the anterior margin of the tooth; then insert the blade, and remove the gum by firmly closing the handles.

This instrument cannot be Nickel-plated without spoiling the cutting edges.

In Polished Steel - - \$2.50

Universal Plate Scissors

Fig. 10



Two-thirds actual size



Greatly reduced size

This greatly reduced size illustration gives a very good idea of the power which the operator possesses in cutting metal to any form with the Universal Scissors.

Fig. 10. Scissors, $4\frac{1}{2}$ in. long, Nickel-plated - \$1.60

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I S.S.W. Pattern Chair, Leg Base	-	- - - - -	30
I Case Harvard Chair	-	- - - - -	20
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I Davis Gasometer, less Face Piece and Tubing, excellent condition	-	- - - - -	18
I Wetherby Suction Machine (new style), in A-1 condition			25
I Davis Gasometer	}	- - - - -	25
I Mills Centrifugal Casting Outfit			
I Olivian Swager			
I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler	-	- - - - -	12
I S.S.W. Leg Base Oil Chair	}	- - - - -	75
I Golden Oak Clark Cabinet			
I S.S.W. Metal Fountain Cuspidor			
I Golden Oak Clark Cabinet	-	- - - - -	25
I Large G. O. Cabinet. A-1 condition. A bargain	-	- - - - -	60
shape	-	- - - - -	55
I Ash Britannia Chair. Leather upholstery. A-1 mechanism			100
I Electro Dental Engine, Register All Cord, good condition.			
220Resistance Plates to reduce to 11 C.V. Price includes Direct H.P. and R. Angle. Good condition	-		60
I Davis Vulcanizer. Good condition	-	- - - - -	10

WANTED—Second Elgin Casting Apparatus.
Collapsible Chair. State prices and condition.

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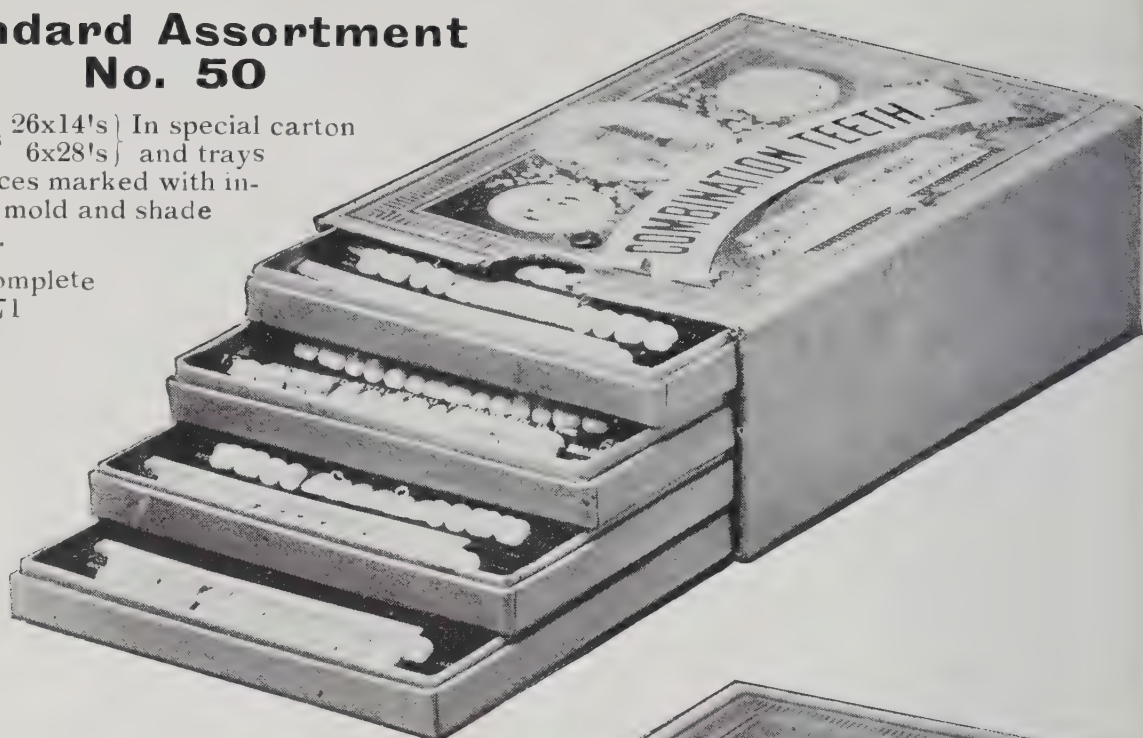
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Standard Assortment No. 50

Contains $\left. \begin{matrix} 26 \times 14's \\ 6 \times 28's \end{matrix} \right\}$ In special carton
with spaces marked with in-
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numbers.

Price Complete
\$52.71

Single
set price
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carton and
trays. Each set of teeth has
its own partitioned space
marked with mold and
shade number.

Price complete,
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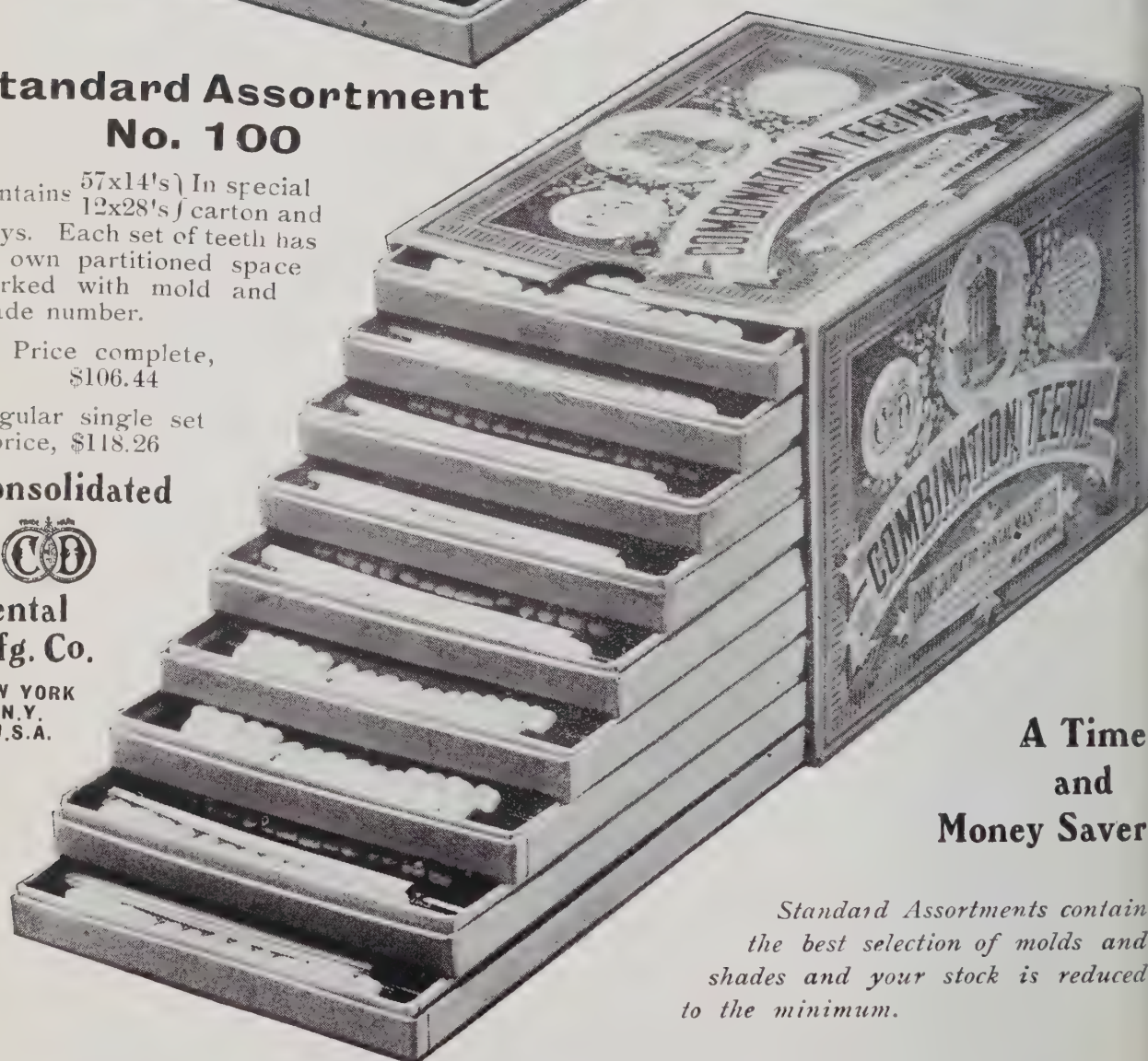
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price, \$118.26

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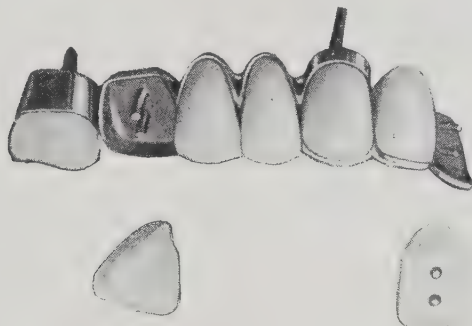
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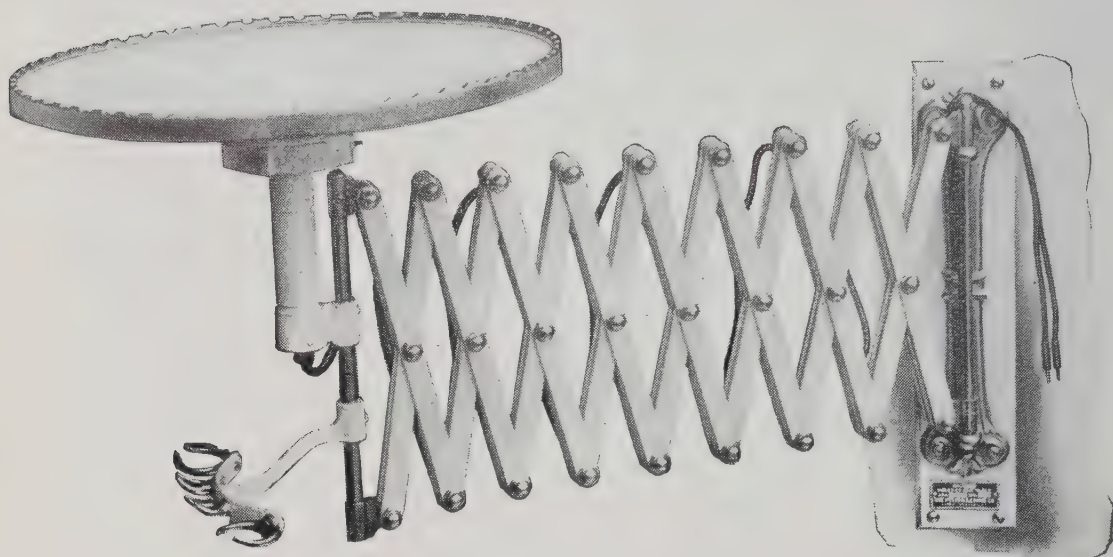
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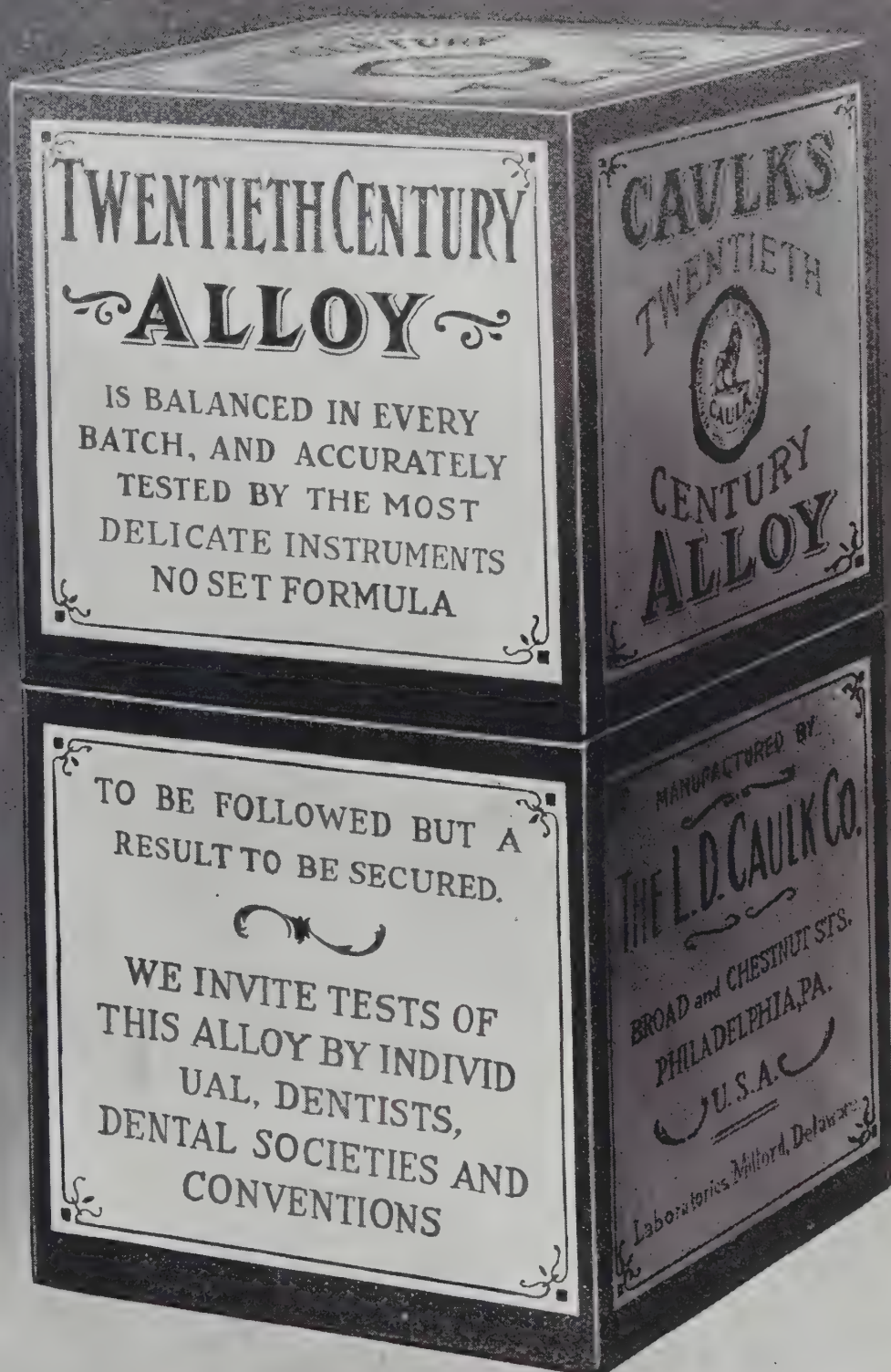
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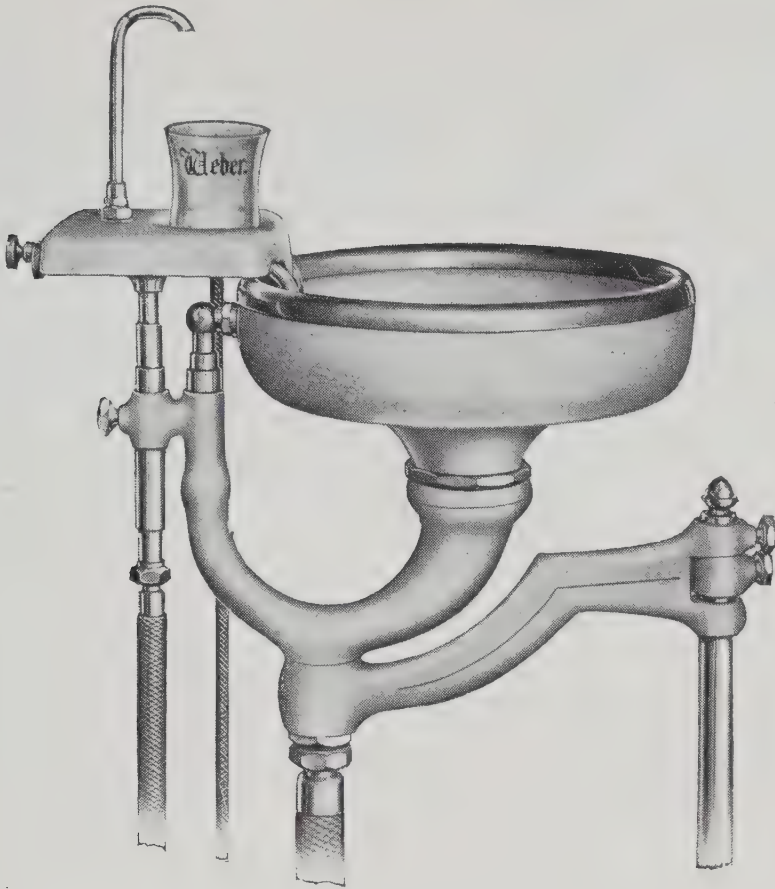
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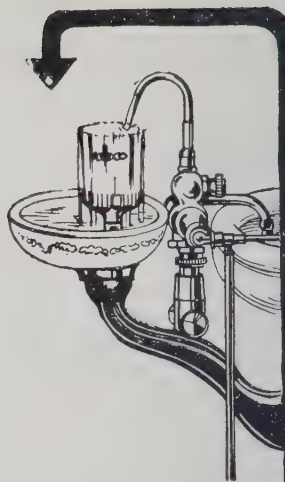
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For the Operator**

II. A refreshing receptacle for the patient's dental plate.

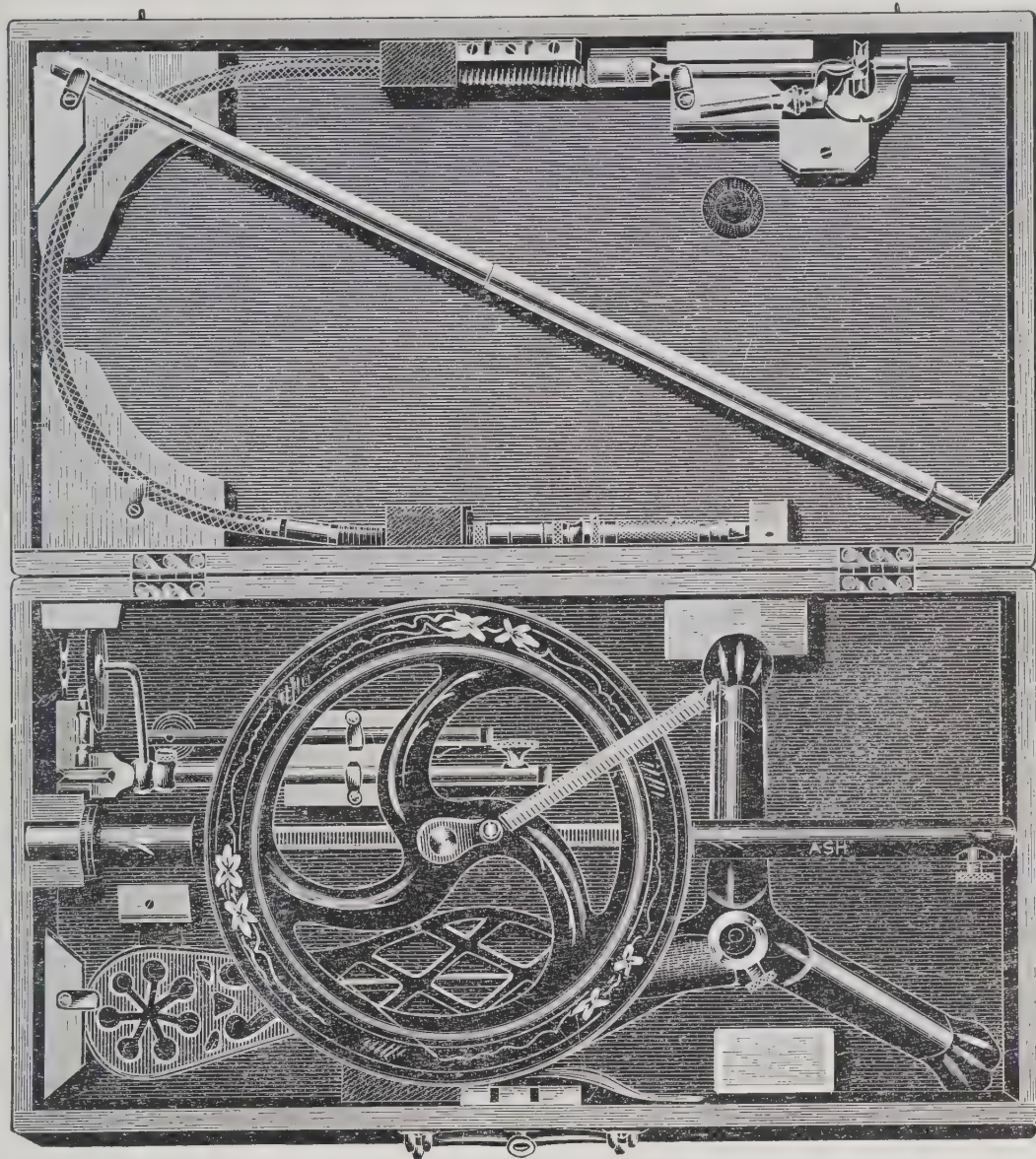
III. A cleansing dip for the operator's fingers.

**A. C. Clark
& Company
Manufacturers**

**Grand Crossing
Chicago, Illinois**



Ash's Travelling Engine



□ The illustration shows this ideal equipment boxed in its neat travelling case.

□ The box is neatly finished and equipped with serviceable handle and lock.

□ This engine can be put together or dismantled in a minute or two without the aid of either screw driver or spanner.

□ The total weight of equipment including lathe attachment is 32 lbs.

□ The engine is a perfect running apparatus and fully guaranteed.

With No. 7 H.P. Duplex Spring and Slip Joint - \$28.50

With above equipment and Lathe Attachment - 37.50

Claudius Ash, Sons & Co., Limited

STUDENTS' EQUIPMENTS

Ash's C Style Foot Engine

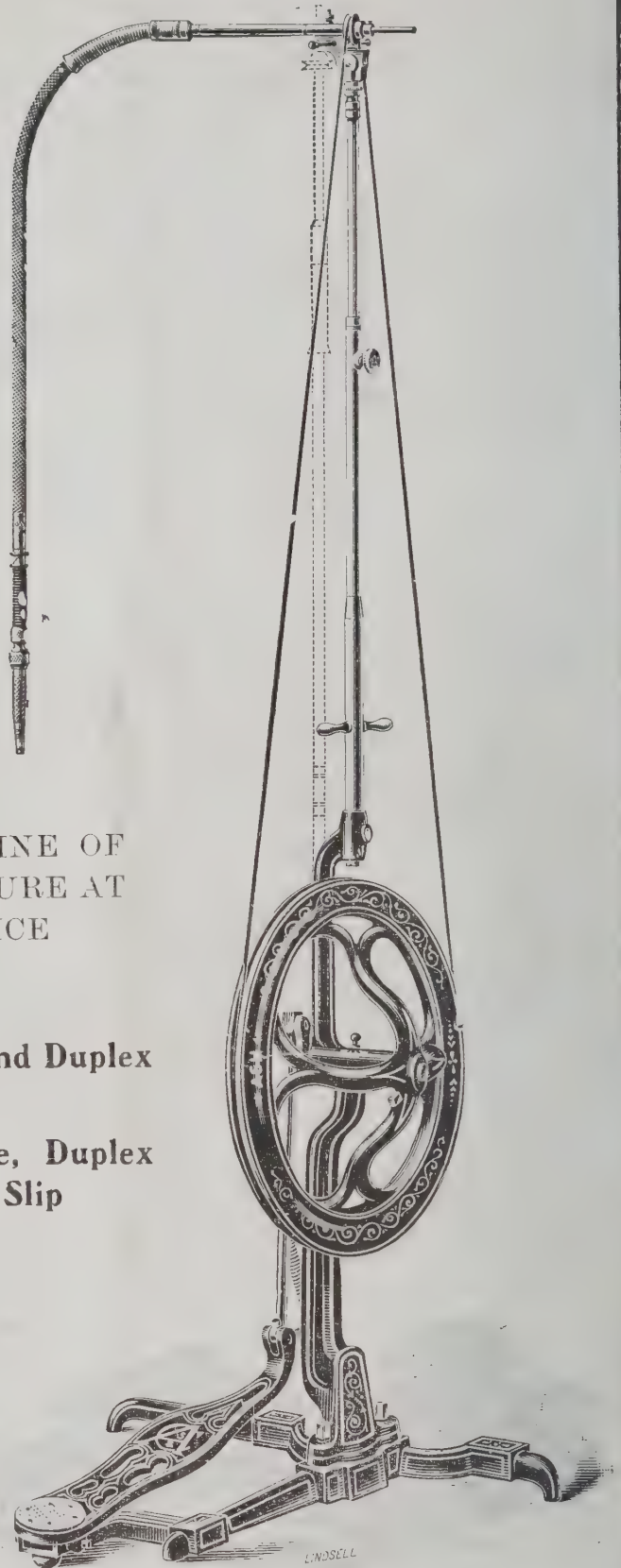


A GUARANTEED ENGINE OF
OUR OWN MANUFACTURE AT
A MODERATE PRICE

With No. 7 Hand Piece and Duplex
Spring, \$23.50

With No. 7 Hand Piece, Duplex
Spring and No. 2 Slip
Joint, \$28.50

*Cash Discounts
allowed from above
Prices*



Claudius Ash, Sons & Co., Limited

ASH'S
CANADIAN
MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

CLAUDIUS ASH, SONS & CO. LIMITED.

CANADIAN BRANCH,

11-13 GRENVILLE ST. TORONTO, CANADA.

MAIN DEPOT

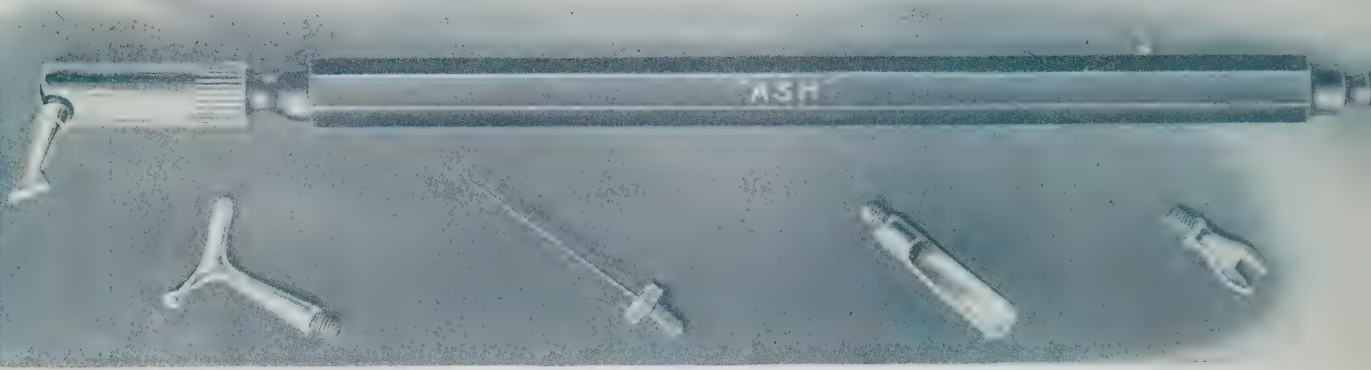
LONDON, W. ENGLAND.



The New Instrument

THE

Mosley Angle Holder



For full description of this New Instrument
see pages 14 and 15 of this issue.

Price with Points - - \$3.75

Direct or through your Dealer

CLAUDIUS ASH, SONS & CO., Ltd.

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MAY, 1914

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Signs of Early Summer

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NOTHING on earth can smile but man. Gems may flash reflected light, but what is a diamond-flash compared to an eye-flash and a mirth-flash? Flowers cannot smile; this is a charm they even cannot claim. It is the prerogative of man; it is the colour which love wears, and cheerfulness and joy—these three. It is the light in the windows of the face, by which the heart signifies it is at home and waiting. A face that cannot smile is like a bud that cannot blossom and dries up on the stalk. Laughter is day and sobriety is night and a smile is the twilight that hovers gently between both—more bewitching than either.

—*Henry Ward Beecher.*

Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, MAY 1, 1914

No. 11

NOTES ON CASE OF CROWN REPAIRED BY ASH'S FACING.

By H. M. PEACOCK, L.D.S., Eng.

Patient—A man suffering from major epilepsy, and having eight or ten fits per week.

Before the patient came to me, two central incisors had been crowned with ordinary porcelain-faced pivots. During a severe fit a wedge was forced between the front teeth: one pin was broken in the root, and the facing was broken on the other.

On December 19, 1911, this facing was repaired by cementing an Ash's facing in position with Harvard cement, but nothing was done to the other tooth.

In July, 1913, during another fit, the crown was wrenched completely off, the pin being twisted, but the facing unhurt. I straightened the pin, fitted a tooth to the other root, backed it, and soldered the two together. I quite expected the facing to come off, but it seemed quite firm, so I replaced the crown. Early in November the patient, during a fit, had the facing removed at last, and I put on another. I should like to point out that the backing did not come quite to the top of the facing, so that it could not afford it much protection.

SIXTH INTERNATIONAL DENTAL CONGRESS, 1914.

London, August 3 to 8, 1914.

Patron: His Majesty the King.

Much progress has been made with the arrangements for the Sixth International Dental Congress, which will be held in London from August 3 to 8, 1914, under the patronage of His Majesty King George V. and at the invitation of the British Dental Association.

The British Government has issued invitations to foreign Governments and also to the self-governing Dominions of the British Empire to send official representatives to the Congress, and several delegates have already been appointed. Invitations have been issued to dental societies and organisations throughout the world, and steps have been taken to secure as Reporters or introducers of discussions in the ten Sections of the Congress the co-operation of leading specialists and representative authorities in all branches of dental surgery.

National Committees are already at work in America, France, Germany, etc. It is hoped that National Committees in all countries will stimulate interest in the Congress and enlist the active support of all eligible members of the Profession.

The Committee of Organisation has completed the following list of Sections, Officers, and Subjects for Report and Debate. Hon. Presidents of Sections, representing the various countries included in the International Dental Federation (F.D.I.), will be appointed. Those nominated by the U.S.A., France, and Germany appear below. Offers of Papers on subjects other than those selected for Reports should be made as soon as possible to the Secretaries of the appropriate Sections, or to the General Secretaries, Messrs. Norman G. Bennett and H. R. F. Brooks.

A Demonstrations Committee is being organized, with Mr. T. A. Coysh as Chairman and Mr. W. F. Mellersh as Hon. Secretary.

The International Dental Congress Museum is intended to be representative of every Section of the Congress. Mr. A. Hopewell-Smith is Chairman of the Committee, and Mr. F. N. Doubleday is the Hon. General Secretary. Application forms and all information will be sent to all intending exhibitors on application at the Office of the Congress—19 Hanover Square W.

TEETH WAX FOR TAKING BITES.

By MR. VAL KAY, L.F.P.S. Glas.

It is not generally known that teeth wax (this is the black wax on which pin teeth are usually mounted) can be utilized for taking bites. This is carried out in the following manner:—

Place a sufficient quantity of the wax in lukewarm water; it soon becomes sufficiently soft to apply to the alveolar processes on the pink wax, or preferably on Stents composition, for the bite. It is easily moulded into shape, which should be cubical wherever possible, and made to adhere to the composition by gently applying a heated knife or spatula to the labial and lingual sides.

When edentulous jaws are being dealt with, build up the composition for the lower jaw cone-shape, with two or three cuts on the surface of it; the teeth wax, which is fixed only for the upper jaw, then descends on to the cone-shaped composition of the lower and gives the bite.

This teeth wax, I find, possesses every advantage over other materials; it remains soft much longer, and the bite is more certain. If water is not at hand, a gas or spirit flame will serve, if used carefully, to soften the wax, but it is not as clean as water.

The patient's bite is controlled by the dentist. He is told to close the mouth slowly, and the dentist allows the closing to go only far enough to define the facial expression—allowing for muscular movement, sympathetic generally. (Study of facial beauty or art.) This applies chiefly to edentulous jaws.

In cases in which there are antagonizing or articulating teeth, the patient cannot, of course, bite too deeply into the wax.

I am indebted to Professor Schroeder, of the Royal Dental Institute of the University of Berlin, for the knowledge of this special use of teeth wax.

When the linen backing sticks to black rubber, place the sheet in cold water for a few moments, when the linen can be easily removed.—C. Ash & Sons.

ON THE SUBJECT OF THE ARTICULATION OF THE TEETH

So much attention has been devoted of late years to the movements of the jaws and the articulation of artificial dentures that distinct benefit must result to the community at large from the labors of Bonwill, N. Bennett, G. Campion, Christensen, Constant, Dolamore, Francks, Gritman, Gysi, Krabbe, Luce, Morton, Parfitt, Robinson, Schwartz, Victor Smith, Snow, Spee, C. Tomes, Turner, Sternfield, J. Ulrich, Walker, Warnekros, Weiss and others, because they represent a very great advance in prosthetics; a firm foundation of knowledge has been laid down on which every dental worker can build with hope of realizing his ideals.

One of the most comprehensive reviews of the subject is to be found in the chapter on "The Selection, Arrangement, and Articulation of Artificial Teeth," contributed by Charles R. Turner, D.D.S., M.D., to the American Text-Book of Prosthetic Dentistry (1907).

As a result of these studies, the needs of the Profession have become better known to the Manufacturers, and, just as Claudius Ash, from the year 1830 onwards, made teeth for the requirements of his generation, his successors, Claudius Ash, Sons & Co., Ltd., were the first to produce teeth of the proportions which modern study has established as anatomically correct.

These teeth were introduced in 1907, made from patterns carved by H. C. Visick, L.D.S. Eng., D.D.S. Univ. of Penn., and were first advertised in 1909.

If they have been less extensively advertised than the patterns of some other Manufacturers, the explanation is to be found in the fact that their popularity, due to the recognition of their utility, has been so great that the demand has exceeded the supply; **this is the best advertisement that any article can have.**



Ash's Mineral Teeth

Dates of Introduction of Various Kinds.

- 1837 Plain Gold Tube and Gum Gold Tube Teeth.
- 1841-2 Flat Short Pin Teeth.
- 1845-6 Various Gum Blocks of Teeth.
- 1848 Teeth with Platinum Loops.
- 1850 Teeth with Gold Pins.
- 1852 Teeth with Platinum Bars.
- 1856 Tube Pivot Teeth.
- 1856 Plain Platinum Tube and Gum Platinum Tube Teeth.
- 1858 Flat Long Pin Teeth.
- 1858-59 Various forms of Pinless Teeth.
- 1858-59 Various Forms of Gum Pinless Teeth.
- 1858-62 Various Forms with Pins.
- 1859 Vulcanite Teeth with Screw Pins.
- 1859 Vulcanite Single Gum Teeth.
- 1859 Gum Sectional Teeth.
- 1859-60 Grooved Teeth with Single Pin.
- 1860 Dove-tailed Teeth.
- 1860-61 Vulcanite Teeth with Headed Pins.
- 1868 Open Crown Teeth.
- 1875 Various forms of Diatoric Teeth.
- 1888 Tube Crowns.
- 1895 Stained Teeth for Smokers and others.
- 1895 Black Teeth as used in the Far East.
- 1903 Dowel Crowns.
- 1907 Anatomically Proportioned Bicuspids and Molars.
- 1908 Repair Facings.
- 1913 Bridge Teeth.

=====The Genuine, Original===== Stents Composition

The Pioneer of all Impression Compositions
has now been before the Profession for

FIFTY-SIX YEARS

(It was introduced in 1857)

and stills holds the premier position as

: : : THE BEST : : :
IN THE WORLD

for taking impressions of the mouth and
: : for many other useful purposes : :

ATTEMPTS have been made to imitate STENTS COMPOSITION; even the color of the box in which it is packed, and the color of the label on the box, have been copied, for the purpose of deceiving the unwary; hence it is necessary to say that every cake of genuine, original STENTS COMPOSITION bears the Trade Mark, which consists of the outlines of two Impression Trays, and the name

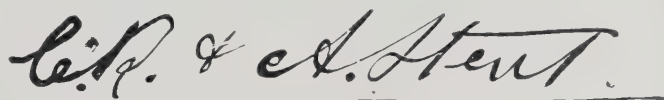
STENTS

There is no other genuine, original STENTS COMPOSITION

STENTS COMPOSITION—*Continued*

TO BE OBTAINED OF
ALL DENTAL DEALERS

The label on every box bears this signature:



BEWARE OF SPURIOUS IMITATIONS!

The genuine original STENTS COMPOSITION is prepared in round cakes, pink or yellow in color, and supplied in half-pound boxes.

STENTS RENOVATING COMPOSITION

This genuine, original STENTS RENOVATING COMPOSITION, which is expressly prepared for mixing with used, discolored composition, to make it as good as new, is prepared in round pink cakes, and also supplied in half-pound boxes.

Sole Owners of the Original Recipe:

CLAUDIUS ASH, SONS & CO., LIMITED

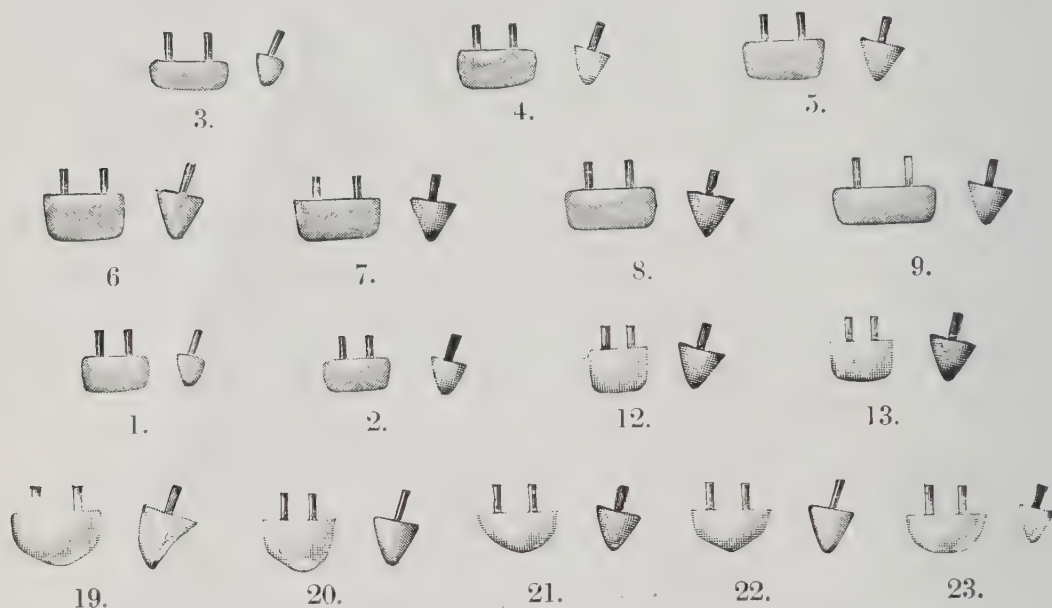
5 TO 12 BROAD STREET, GOLDEN SQUARE, LONDON W.

CANADIAN BRANCH—TORONTO

Dall's Mineral Tips

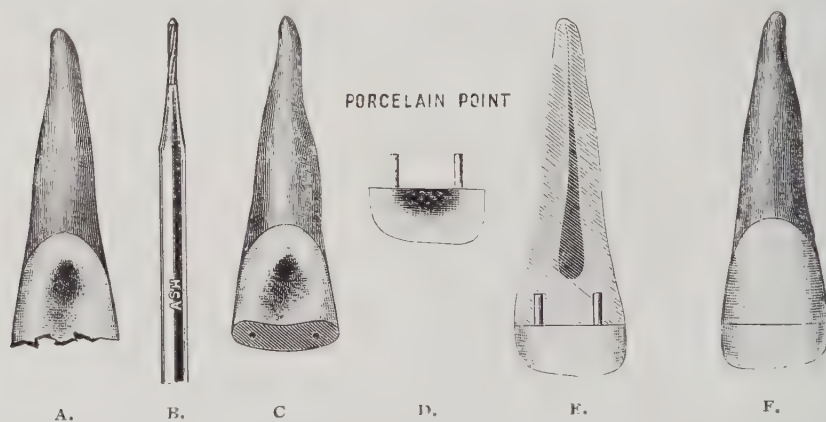
FOR RESTORING THE INCISAL EDGES OF UPPER ANTERIOR TEETH.

MADE IN SEVERAL SIZES AS ILLUSTRATED BELOW.



Singly - - - each, 35c.

TREATMENT OF A FRACTURED INCISOR WITH SUCH A TIP AS ILLUSTRATED ABOVE.



A.—The fractured tooth—palatal view.

B.—Drill for making holes for the reception of the pins.

C.—Prepared tooth ready for Tip—palatal view.

E.—Section of repaired tooth which shows position of pins in relation to the pulp.

F.—Labial view of finished tooth.

YEN-OR

ZINC CHLORIDE
FORMALDEHYDE
CHLORPHENOL

A PULP-CANAL FILLING AND TOOTH DRESSING

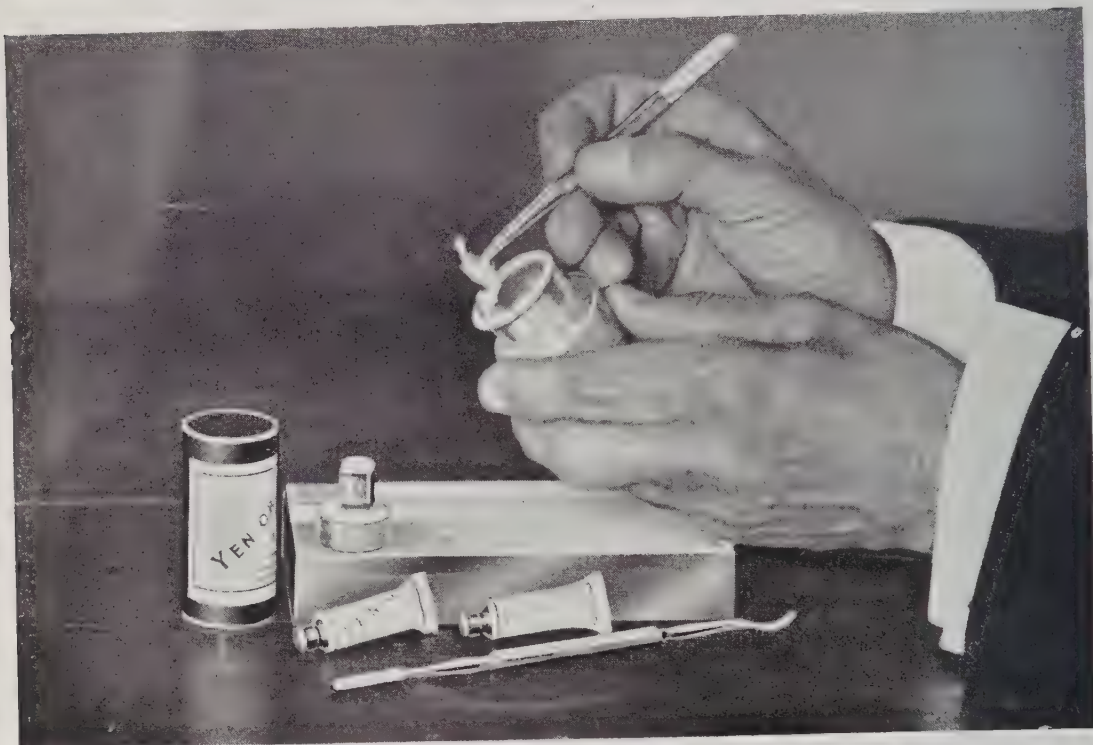
Antiseptic. Anti-Putrefactive. Dessicant.
Penetrative. Germicidal.



Yen-or is a carefully prepared Germicide of great value in Dental Practice. Made from the prescription of a qualified Dental Surgeon who has made pulp treatment a special study for over twenty-five years. This preparation has been used by him very successfully for several years.

YEN-OR (*Continued*)**Advantages:—**

Always ready for use.
Easily introduced into pulp-canals.
And in canals not easy of access.
Easily removed.
Has no irritant action.
Does not discolor the teeth.
Small remnants of living or devitalized pulp are rendered harmless.
Penetrates deeply into infected or softened structure.
And rapidly destroys bacteria, so is useful for dressings also.
It keeps well in collapsible tubes of pure tin.

**Method of using:—**

It can be conveyed into the pulp-canals on a smooth probe or bristle followed by a gutta-percha point, or introduced on very small pieces of bibulous paper.

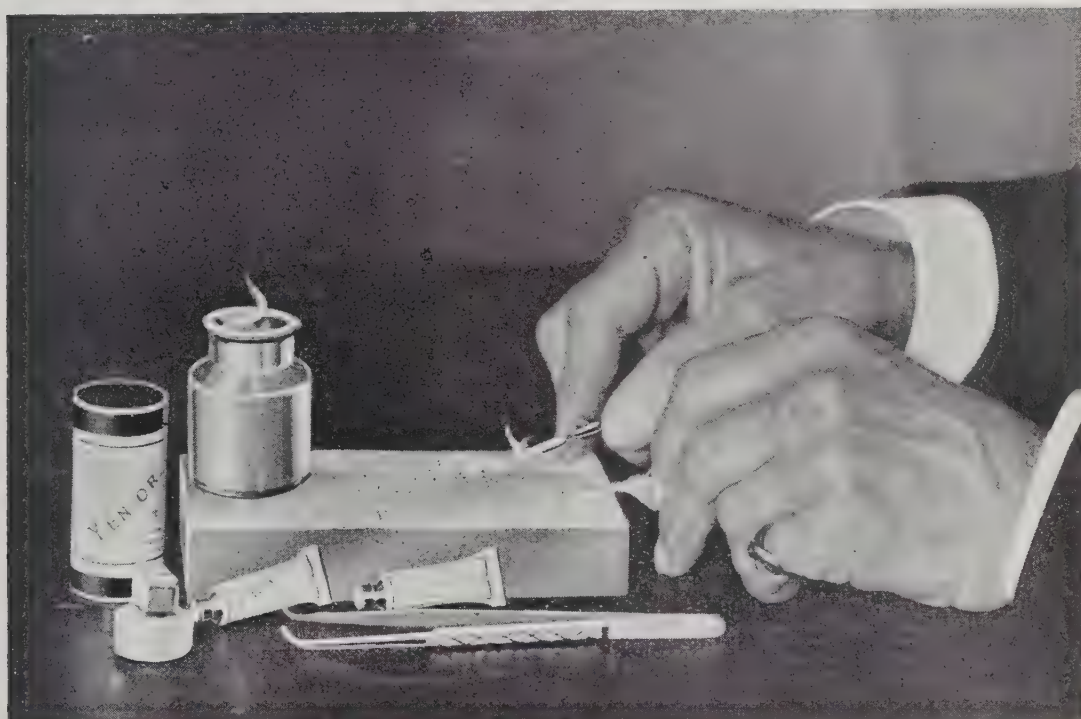
A good method is as follows:—

Bibulous paper is torn into strips about half an inch wide and four inches long; they are best kept in a wide mouth stoppered bottle—containing a few crystals of thymol—ready for use.

YEN-OR (*Continued*)**To fill a pulp-chamber:—**

Squeeze out a little Yen-or paste from the tube on to a mixing slab; take a strip of the bibulous paper from the bottle, lay the end on the slab, and with a spatula smear the end of the paper with the paste; then scrape off small pieces of the paper, and lay on the slab, side by side, enough to fill the canals. These small pieces are easily conveyed into the canals with a fine smooth probe with a blunt end.

When the pulp-chamber is full, take up any excess of paste with a pellet of bibulous paper, then seal with a pellet of cotton and mastic while the material is being prepared to complete the filling of the cavity.

**As a dressing:—**

A small piece of bibulous paper treated in the same way may be laid as a dressing over the sensitive area in tender teeth, under a filling. Any cavity may be wiped out with Yen-or with advantage, especially where it is difficult to remove all the softened dentine.

Supplied in Collapsible Tubes - Each \$1.80

SOLE AGENTS:

Claudius Ash, Sons & Co., Limited

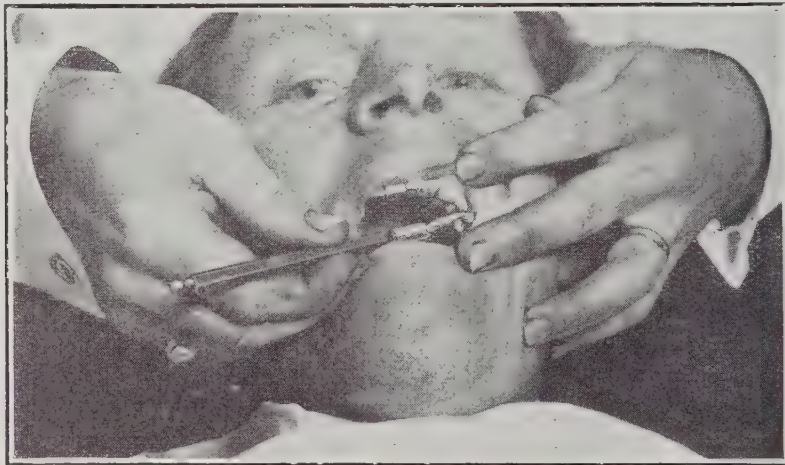
The Mosley Angle Holder

A New Instrument---One That YOU Need

This Angle Holder is equipped with five different instrument points that have been selected as the most useful for operations in the more inaccessible cavities.

**Chisel, Burnisher, Approximal Blade,
Broach Holder and Orthodontia Wrench.**

The holder is a positive locking device allowing the different instruments to be held at various angles and twists. The principle involved is a great advance over the old ball and socket fixture and ensures rigidity of the point.



The attachment for holding broaches and cleansers is the most positive of all holders, and allows of any length broach being used. Cut off the broach to the required length, being sure that enough of the shaft remains after it has been inserted in the attachment to engage with inside bottom of the screw socket. To remove, simply force the broach backwards through the attachment.

For Further Description see Opposite Page

The Chisel will be found most useful in operations on all posterior teeth, and is invaluable in preparing cavities for inlays in the distal surfaces of the bicuspid and molar region, heretofore inaccessible except with a burring instrument.

The thin approximal blade will commend itself to all practitioners for shaping up the wax form in the cavity and as an assistant in removing it, as well as being useful for burnishing plastic fillings.

The double-headed burnisher and approximal instrument is almost indispensable for all plastic operations.

The Orthodontia Wrench will be found invaluable to all those who practice the regulation of teeth. It allows the operator to adjust the regulating nuts, no matter at what angle they may be at.



In neat Cardboard Box \$3.75 complete

=====
Direct or through your Dealer

Claudius Ash, Sons & Co., Limited

Ash's Dental Rubbers

The sale of Ash's Rubber, both for base and coating, during the past year has been greater in Canada than ever before. This, in view of the fact that there are many lower priced rubbers offered to the dental profession, shows that the high standard of our rubber is appreciated. Not only is the excellent quality maintained, but the standard of weight also.

It is well to be on your guard respecting the weight, as some rubbers are weighed with the heavy linen backing, and in such instances your loss is about 20 per cent. We are the oldest and largest manufacturers of Dental Rubber, and our product is the standard by which all others are judged. Specify Ash's Rubbers, and so provide against failure and disappointment.

Ash's Dark Elastic Rubber

Purest and Strongest.

To obtain the best results with this product bear in mind that it is all "Pure Para" and contains no colouring matter whatever. It is necessary, therefore, in vulcanization to advance the heat very slowly and vulcanize for at least one and one-half hours.

There are imitations of this rubber offered to the profession, some going even to the extreme of copying the name "Dark Elastic." Refuse these imitations, as if Ash & Sons' name is not on the box and linen back the product is not ours.

Price per pound.....\$ 3.50

Price per 5 pounds..... 15.75

Direct or through your dealer.

ASH'S DENTAL RUBBERS

UNAPPROACHED FOR

Excellence, Purity, Strength, Elasticity, and Density

To mark the genuineness of our Rubbers, the face of every box and envelope which we supply bears this signature and monogram—

A. Ash & Co. Ltd. 

and one of the pieces of cloth in which each sheet of Rubber is packed bears this signature—

A. Ash & Co. Ltd.

in addition to the name of the Rubber. Always ask for ASH'S when ordering our Dental Rubbers.

TRUE CHEAPNESS.

In choosing dental rubbers, **price** should not be taken as the main guide, because some rubbers which are considered cheap are really dear when they are compared with the more expensive rubbers, many of which yield from 30 per cent. to 40 per cent. more plates to the pound than some of the cheap rubbers.

If **true cheapness** is the aim of a buyer he should not fail to take **quantity** into account, since it counts for much, quite apart from **quality**.

We offer both quantity and quality.

We guarantee full weight in every box or envelope of Rubber of our manufacture, exclusive of the tracing cloth in which it is packed.

Ash's Dental Rubbers

Are the best in the World, and are the standard by which all others are judged.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....	\$6.00	\$5.40	\$5.00	\$4.75
No. 1X Pink, Medium.....				
No. 1 Pink, Light				
Gum Pink, Medium.....				
Gum Pink, Light.....	5.00	4.50	4.25	4.00
No. 2X Pink, Medium.....				
English Pink, Medium.....				
English Pink, Light.....				

FOR BASE

Improved Black.....	4.50	4.05
Combination.....		
White for Side Blocks, etc.....		
Child's "G"		
A. E. Elastic, Dark Brown.....	4.00	3.60
W. Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown		
Solid Base.....	3.50	3.15
Dark Red.....		
Flexible Base.....		
Dark Elastic.....		
Maroon	3.00	2.70
Red.....		
Orange.....		
Dark Brown.....		
Brown.....		
English Base.....		

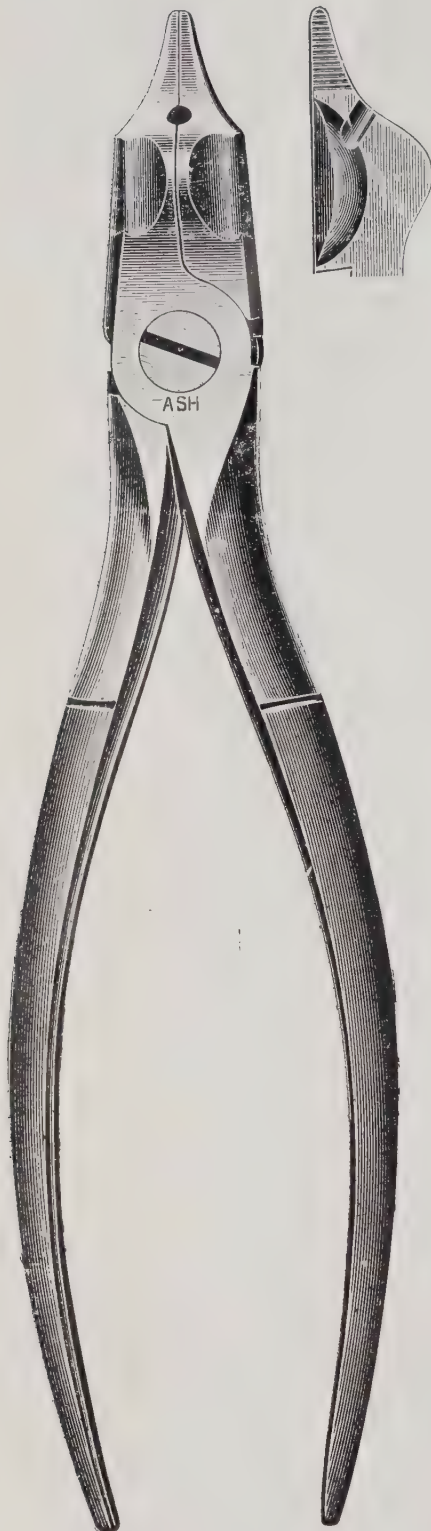
SPECIAL—FOR TENDER GUMS, ETC.

	Degree Fahrenheit	Time		lb.
Soft Pink, for lining Palates.....	310	1	15	\$6.00
Soft Dark Red.....	310	1	15	4.50
Vela for Artificial Palates.....	270	6	0	6.00
Brown Weighted.....				4.25
Pink Weighted.....				6.00
Brown Repairing.....				4.50
Pink Repairing				6.00

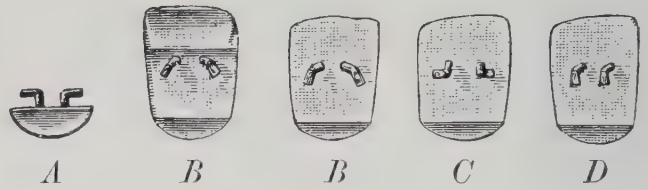
NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

CLAUDIUS ASH, SONS & CO., Limited

Ash's Pin-Roughing and Bending Pliers



Full size.



This is the most useful tool ever devised for cutting, roughening, and bending the pins of flat and vulcanite teeth.

To obtain the best results the pins should be bent as nearly as possible at right angles—see Fig. A—and in such a direction that they will grasp the vulcanite in the thickest part. In the several illustrations given above, Fig. B shows the most usual bend.

Pliers, as illustrated, nickel-plated, \$1.50

Ash's Clayite



A large tin of the most satisfactory Moulding Compound for 35 Cents.

Its sale is world-wide and the satisfaction is complete.

SEND US A MAIL ORDER.

Hampel's Amalgam Carrier

This is a most useful instrument for carrying Amalgam to and discharging it in the cavity.

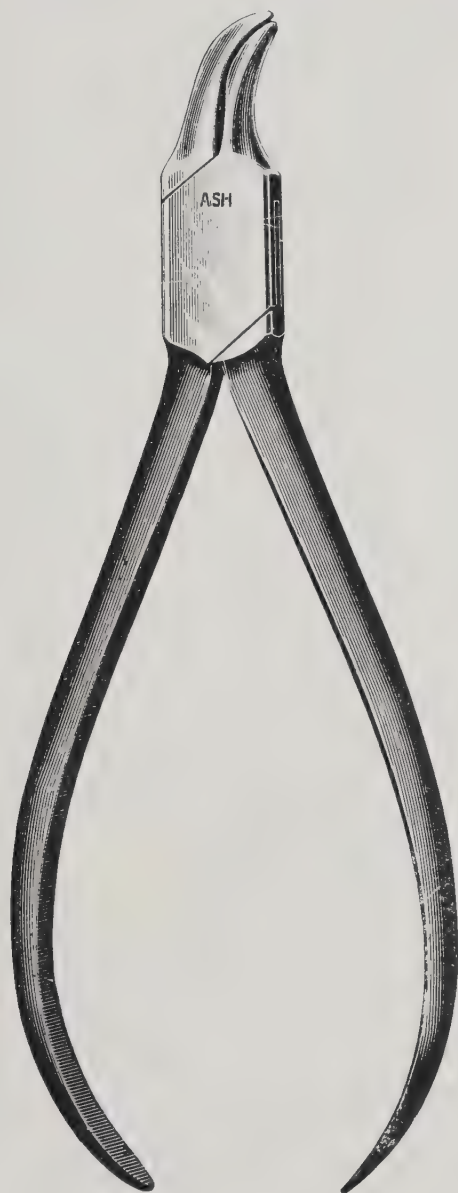
To take up the Amalgam it is only necessary to press the tubular end of the carrier into it a few times until the tube is filled.

The Amalgam is discharged by taking part B between the first and second fingers and pressing with the thumb on the end.

Price.....\$1.40



Ash's Crescent Contouring Pliers



4 3/4 in.

Crescent Contour Plier\$1.25



Ash's Rubber Dam Punch

This punch has a circular plate containing four holes of different sizes.

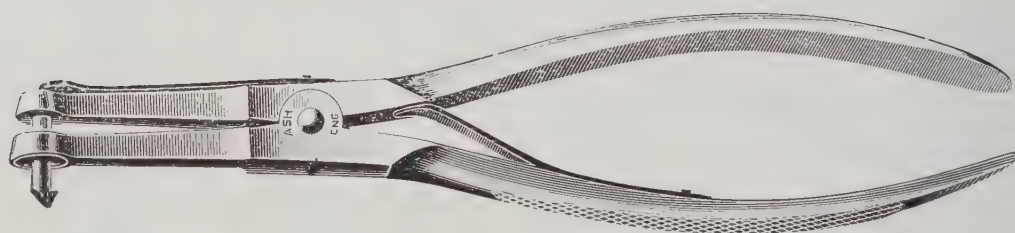
The punching pin A slides into socket B in a straight line when pressure is applied, and thus cuts equally all round the edge of the holes.

There is a small spring on the pin, inside the socket, which opens the handles when the pressure is released.

The Rubber Dam can be laid in the space beneath the plate and pin without danger of being caught or torn in the joint of handles.

Price.....\$3.75

Ash's Crown Slitter



Half Natural Size

With this Crown Slitter a metal band can be divided so neatly as to admit of the edges being brought together again and soldered, if the crown is to be replaced after needful treatment of root has been accomplished. The Cutter can be set in four different positions.

Price.....\$3.50

Ash's Nerve Canal Pliers

Straight and Curved

For Removing Broken Drills from Root Canals

In preparing root canals for filling it sometimes happens that a drill is broken, and the question then arises how the piece left in the root can best be extracted.

The points of these Pliers are fine enough to enter the root canal and to grasp the thin stem of the broken point that is lodged within it.

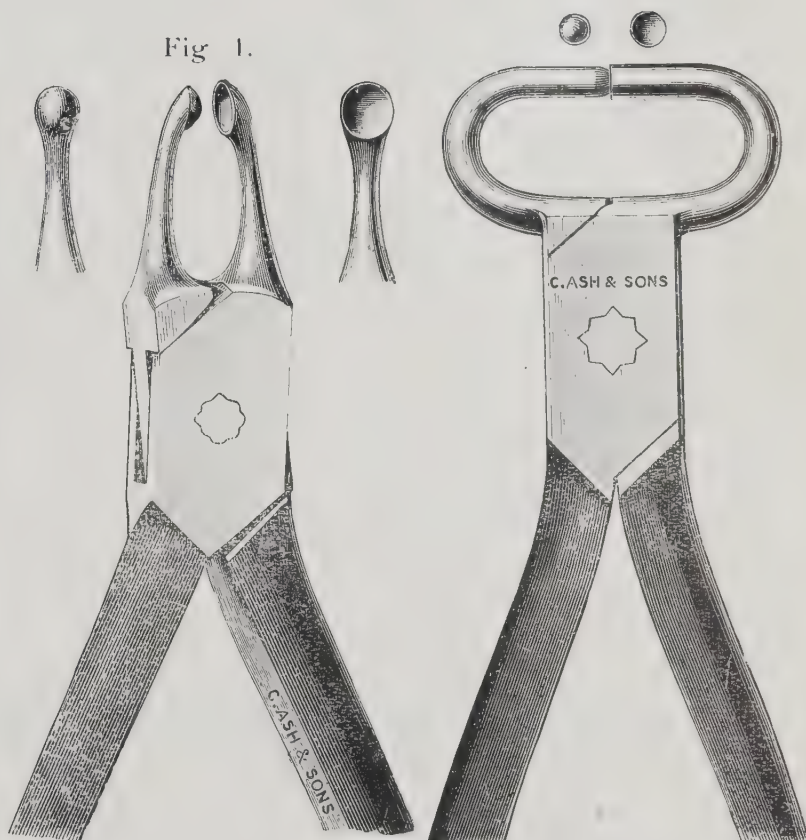
Price, Straight or Curved, \$1.35.



Patrick's Contouring Pliers

Fig. 2.

Fig. 1.



5 $\frac{3}{4}$ in. Long.

5 $\frac{1}{2}$ in. Long.

These Pliers are too well known to need an elaborate description. Pattern No. 2 finds the most favor. It should find a place in every laboratory.

Price either pattern\$1.90



Ash's Fine Locking Tweezers

These Tweezers are very accurately made with fine, even biting beaks that afford you perfect satisfaction.

Price each - - 30 Cents

Ash's Vulcanite Broach Holder

This is a neat, well balanced instrument that enables you to obtain a better and more delicate feel to your broach.

It is accurately made, gripping the broach perfectly with a proper clamp.

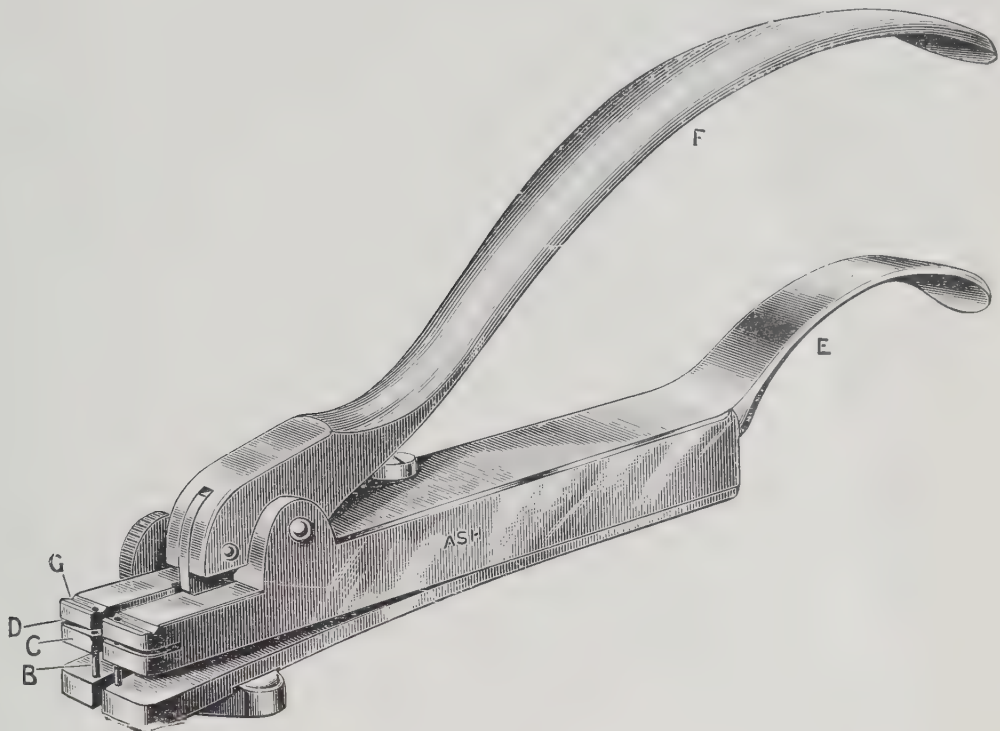
Unlike the ordinary holder it is an ornament to your table.



Price - - - 30 Cents

Young's Adjustable Perforators

FOR PUNCHING TWO HOLES AT ONCE.



A—Screw which holds the back plate that clamps the pins.

B—Pins.

C—Intermediate Plate with holes that supports and stiffens the pins.

D—Slotted recess into which the metal backing is placed.

E—Lower Level.

F—Upper Level.

G—Groove in upper plate with holes into which the tooth to be backed before punching the backing.

Mr. Young claims that his tool secures, rapidly and with mathematical precision, exact correspondence between the holes in the metal plate used for backing teeth, and the pins of the tooth to be backed. It provides also for the quick and easy disengagement of the plate from the perforating pins after punching. The difficulty of separating, without twisting or injuring the perforated plate (the greatest obstacle to punching two holes at once), is entirely removed.

The risk of fracture in backing teeth is reduced to a minimum.

No measuring is required. The tooth is its own gauge, virtually punching its own holes.

Price, with Set Screw..... \$4.50

JOHN HUNTER AND ODONTOLOGY

By J. F. COLYER, L.R.C.P., M.R.C.S., L.D.S.

Dental Surgeon to the Royal Dental Hospital of London and to the Charing Cross Hospital; Examiner in Dental Surgery, Royal College of Surgeons of England; Honorary Curator Odontological Collection of the Museum of the Royal College of Surgeons of England.

Demy 4to., viii. and 214 pp., with 161 Illustrations, and Photogravure Portrait of John Hunter. Cloth. Bevelled Boards. Gilt Lettered.

Price, net, \$6.50

We can recommend this book as a scholarly endeavor towards a higher dental education, and we hope that its tendency will be to cause men in the dental profession to occupy themselves with the more profound problems of dental science. Anyone devoting only an occasional afternoon to the magnificent Hunterian exhibits will gain benefit.—CLAUDIUS ASH, SONS & CO.

FOR SALE

TOWN OF BLENHEIM, ONT.

DENTAL PRACTICE

Yields \$3,000

Good Equipment \$500

APPLY

Claudius Ash, Sons & Co., Limited

PRACTISES FOR SALE AND HELP WANTED

FOR SALE—Dental Practice, Walkerton, Ont. Apply Dr. F. Hughes, Waterloo, Ont.

FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350

FOR SALE—Toronto City Practice. Apply Ash & Sons 400

WANTED—Graduate Assistant. Queensland. Good position,

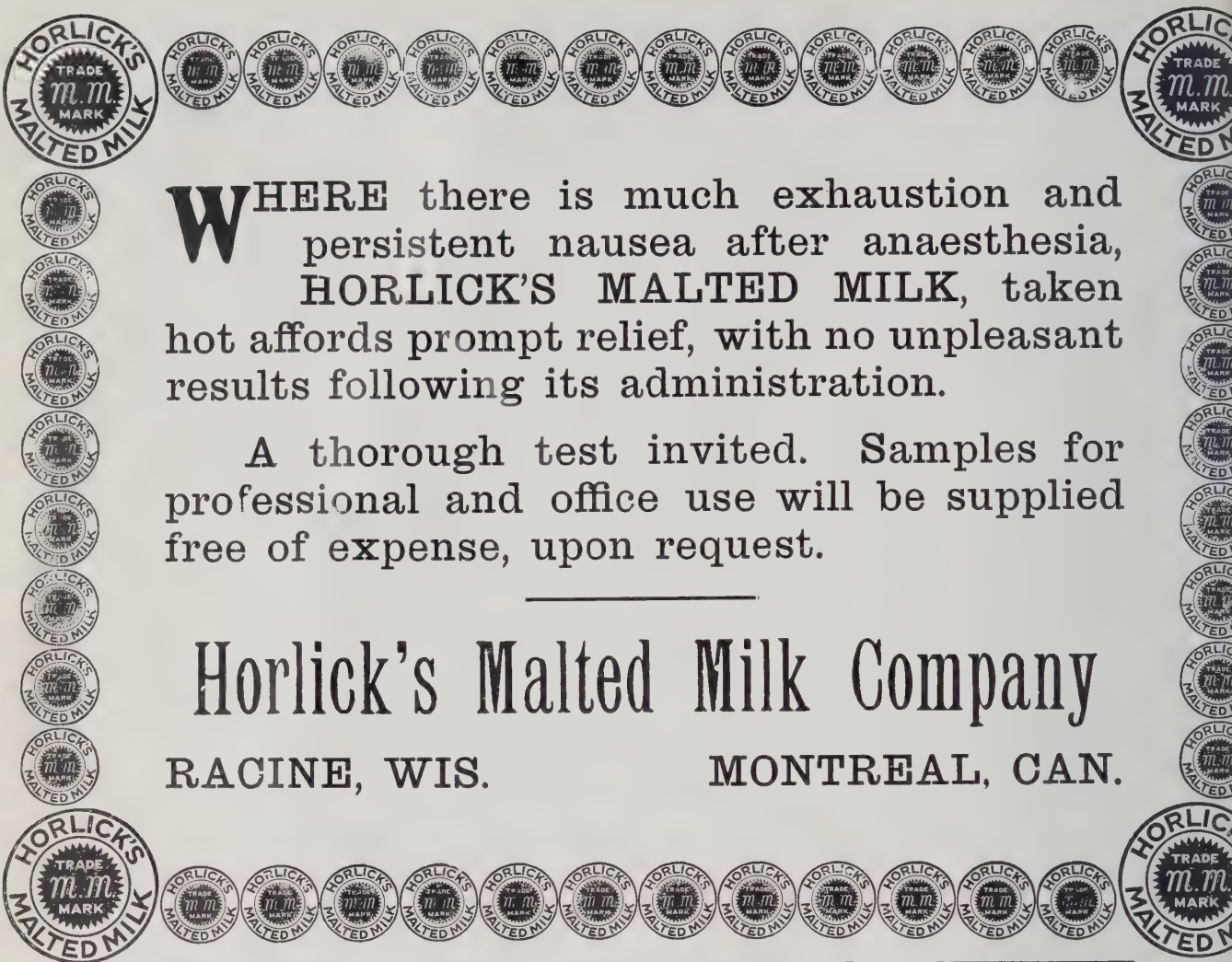
SECOND-HAND GOODS

I Lathe Head. Good condition	}	-	-	-	-	-	-	-	\$ 8
I S.S. White Engine Base with Upright		-	-	-	-	-	-	-	
I S.S.W. Pattern Chair, Leg Base		-	-	-	-	-	-	-	30
I Case Harvard Chair		-	-	-	-	-	-	-	20
I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new		-	-	-	-	-	-	-	60
I Davis Gasometer, less Face Piece and Tubing, excellent condition		-	-	-	-	-	-	-	18
I Wetherby Suction Machine (new style), in A-1 condition									25
I Davis Gasometer	}	-	-	-	-	-	-	-	25
I Mills Centrifugal Casting Outfit		-	-	-	-	-	-	-	
I Olivian Swager									
I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler		-	-	-	-	-	-	-	12
I S.S.W. Leg Base Oil Chair	}	-	-	-	-	-	-	-	75
I Golden Oak Clark Cabinet		-	-	-	-	-	-	-	
I S.S.W. Metal Fountain Cuspidor									
I Golden Oak Clark Cabinet		-	-	-	-	-	-	-	25
I Large G. O. Cabinet. A-1 condition. A bargain		-	-	-	-	-	-	-	60
shape		-	-	-	-	-	-	-	55
I Ash Britannia Chair. Leather upholstery. A-1 mechanism									100
I Electro Dental Engine, Register All Cord, good condition. 220Resistance Plates to reduce to 11 C.V. Price includes Direct H.P. and R. Angle. Good condition		-	-	-	-	-	-	-	60
I Davis Vulcanizer. Good condition		-	-	-	-	-	-	-	10

WANTED—Second Elgin Casting Apparatus.

Collapsible Chair. State prices and condition.

Claudius Ash, Sons & Co., Limited



WHERE there is much exhaustion and persistent nausea after anaesthesia, **HORLICK'S MALTED MILK**, taken hot affords prompt relief, with no unpleasant results following its administration.

A thorough test invited. Samples for professional and office use will be supplied free of expense, upon request.

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DENTAL LABORATORY

Specialist in Crown, Bridge and
Metal Work Exclusively

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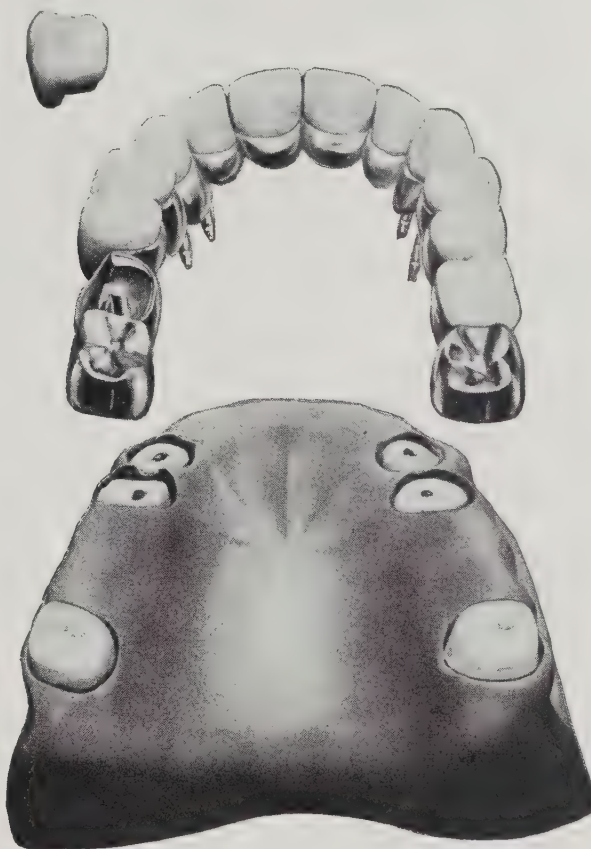
To replace a bridge tooth without rebuilding the bridge —

If emergency or accident demands, you can quickly replace a broken **GosLee** Tooth by cementing a new one in its place on the existing bridge.

With other bridge teeth, restoring of broken or missing members involves the rebuilding of the worn away gold backing or supporting structure. When it wears away again and the facing breaks off again, the annoyance is repeated *ad infinitum*. In bridges of that character, the "interchangeable" feature is a misnomer and is of no advantage because the restoring of a tooth does not remove the cause of the breakage.

**GosLee
TEETH**

are
interchange-
able
without
rebuilding



**GosLee
TEETH**

are
easily
replaceable

SEND FOR BOOKLET "D," AN EASY WAY TO SET THE **GosLee** TOOTH

Consolidated  Dental Mfg. Co.

130 WASHINGTON PLACE, NEW YORK

Specialists in removable and semi-removable bridge work.

Griswold, Morgan, Roach Bennett Bar, Fossum semi-removable and Gilmore attachments

Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

Ash's Swaged Vulcanite Dentures, Bar Lowers, etc.

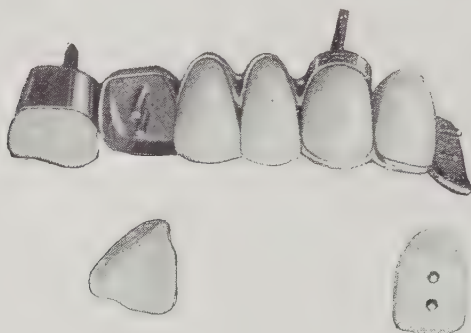
Chas. L. Daly

X. L. C. R. Dental Laboratory

ROOMS, 1, 2, 3, 4 @ 5,
11 GRENVILLE STREET
— TORONTO —

"Your impression **OF** me will largely depend upon your impression **TO** me."— C. L. Daly.

"Send good Plaster Impressions and correct wax bite and leave the rest to me."— C. L. Daly



The above cut illustrates the Dimelow Detachable Facings at **\$2.75** per Tooth, all porcelain posteriors

PARTIAL PRICE LIST FOR LABORATORY WORK:

Gold Crowns : Cen. Lat. Cus.	
and Bic. - - -	\$2.00
Molars - - -	\$2.25 to \$2.50
Bridgework : Anteriors per tooth	\$2.00
Bicuspsids - - -	\$2.50
Molars - - -	\$3.00 to \$3.50
Richmonds, extra - -	\$.25
Facings charged extra at market price.	
Steeles and Dimelow interchangeable Facing and Porcelain	
Cusp. posteriors, per tooth	\$2.75
Richmonds, extra - -	.25
Gold Cusps on posteriors extra	.50
Facings included in above prices	
Goslee and Dowel Bridgework per tooth - - -	3.00
Teeth extra	

Gold Inlays	
(Send wax impression packed in tissue paper)	
Casting only - - -	.75
Gold - - -	.05 per gr.
Rubber Dentures—	
Plate Work, \$2.50 to \$3.00	
(Partials \$2 00)	
Swaging metal plates (swaging only) Aluminium - - -	\$3.00
Gold - - -	\$5.00
Casting Aluminium plates (cast only) - - -	\$4.00
Gold Plates - - -	\$6.00
All teeth charged extra at market price	
Send impressions (unpoured) plaster preferred, for all classes of work including metal work.	

SEND A TRIAL ORDER.

SATISFACTION GUARANTEED

When you write, give full particulars of case and when wanted.

You will not be disappointed.

CHARLES L. DALY

WILLIAMS TANTALUM GOLD OUTFIT

THE TWO TIME SAVERS

WILLIAMS MAT GOLD

"Better fillings—Less time" and

The Tantalum Engine Burnisher

TANTALUM is the only PERFECT BURNISHER ever introduced to the profession, and it is especially adapted for burnishing in WILLIAMS MAT GOLD.

To introduce we make the following offer for a limited time:

1 ¹ / ₈ th oz. WILLIAMS MAT GOLD	\$2.50
1 TANTALUM ENGINE BURNISHER	3.00
10 Royce type cone socket nickel steel pluggers	5.00
1 Cone socket steel core hard rubber handle	1.00
1 Morocco Plush Gold Case	1.00
	\$12.50

Ask for "Special \$5.50 Tantalum Gold Outfit."

ALL DEALERS OR

The Williams Gold Refining Co.

602 Main St., Buffalo, N.Y.



WHOLE OUTFIT - \$5.50

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK

FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

AFTER HOURS N. 4284

DURING THE PAST 54 YEARS

the firm of Johnson & Lund has devoted its best energies to the making of Teeth. Experts in the Art have been busy during this half century experimenting and testing along every branch of the science, with the result that in 1914 Johnson & Lund offer to the Profession the most Perfect Tooth—Strongest Porcelain, Faultless Pin and Best workmanship, Complete Assortment of Molds, the World's Largest Selection of Shades.

—ALL THESE ARE COMBINED IN—
K A Z A N
THE TOOTH OF SERVICE AT YOUR SERVICE

Tell Your Laboratory to use KAZAN

The experience of thousands of Dentists the world over proves that the full-sized, strong, tough Kazan pin offers the maximum of service that can be obtained in an artificial tooth. The men who use Kazan are coining the big profits of Satisfaction from the mint of Experience.

Tell your Dental Depot to Send KAZAN

Claudius Ash, Sons & Co., Limited

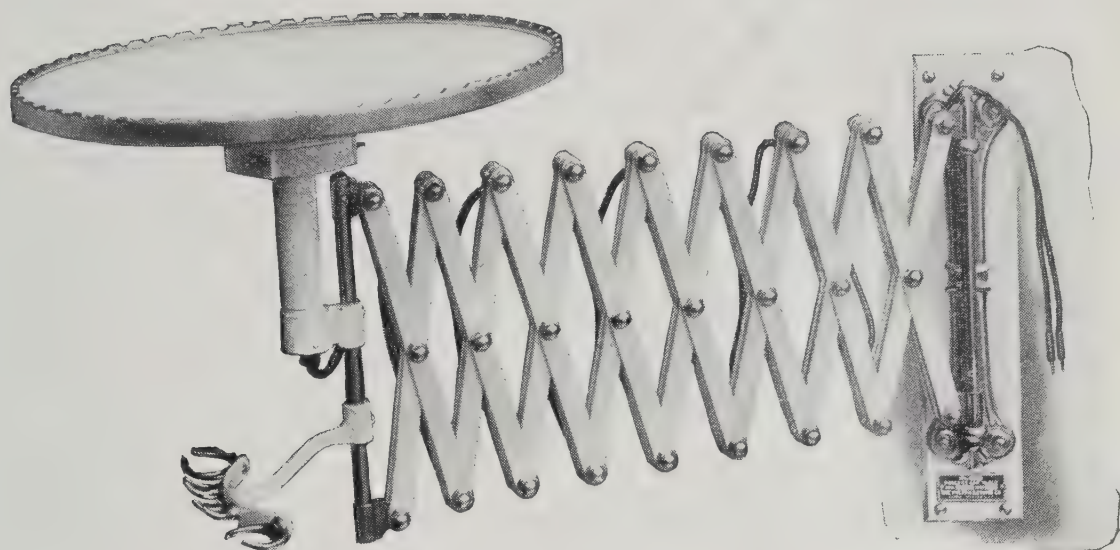
The Pelton and Crane Co.

NUMBER SEVEN

ILLUMINATED BRACKET TABLE

Beautiful and Practical

Heated and Lighted



EXTENDS 10 TO 60 INCHES
(PATENTED)

An Electric Bulb directly under the working surface radiates light through the opal top and warms the instruments.

The new "Number Seven" is the most Sanitary Table ever offered to the Profession.

To the patient it affords that good "First Impression" that is "Lasting."

In Black or White Enamel (as shown)	-	\$25.00
Blue or Gray Enamel (as shown)	-	26.50
Imitation Wood Finish (as shown)	-	27.50
Fitted with Cotton Holder (not shown) extra		3.00

No Office Up-to-Date without the New "Number Seven" Table

The Pelton and Crane Co.

The Compound Shunt System

COMPLETE CATALOGUE UPON REQUEST

Beaubien and Macomb Sts.

Detroit, Mich., U. S. A.

Cements With a Record

In the last few weeks we have received nearly 6,000 letters from dentists of the United States and Canada, all emphatically indorsing one or more of these cements.



This wholesale indorsement of our cements comes after ten years experience with them, during which most of the dentists of America have used them. We have the testimonials referred to and can produce them at any time.

THE L. D. CAULK COMPANY
Canadian Branch—70 Bond St. - TORONTO

De Trey's Synthetic Porcelain

has established a new ideal in dentistry.

That ideal is to restore teeth to their natural appearance—not nearly, but absolutely.

To realize the ideal in every operation, practically requires

CAULK'S ASEPTIC SHADE GUIDE



The shade teeth are made of real mixes of Synthetic, and thus you get the precise shade of our several powders.

With a little care it will last for years, and enable you to insert fillings that are a joy to you and a source of permanent satisfaction to your patients.

Get it from your Dealer.

THE L. D. CAULK COMPANY

Laboratories, Milford, Delaware.

Canadian Branch—70 Bond St. - TORONTO

THE MEASURE OF VALUE

demande in a dependable

Oral Prophylactic is exactly provided in **Pyorrhocide**

BECAUSE Pyorrhocide removes daily deposits of salivary calculus that contribute to the formation of tartar, the breeding place of the bacteria of caries.

BECAUSE Pyorrhocide naturally stimulates blood circulation in the gum tissues—strengthens—revitalizes those tissues to more effective resistance to germ infection and multiplication.

BECAUSE Pyorrhocide neutralizes offensive breathfeter and promotes the antiseptis desirable in operating.

BECAUSE Pyorrhocide, by preserving in health the tissues surrounding the roots, insures permanent abutments for restorations.

BECAUSE Pyorrhocide, from its original, scientific combination of constituents, is a vitally important part of the consistently successful Dentinol and Pyorrhocide Method of preventing and treating pyorrhea.

BECAUSE Pyorrhocide is economical to the patient, a \$1.00 can outlasting the quantity of ordinary pastes and powders obtainable for the same amount.

BECAUSE Pyorrhocide produces results that insure satisfied, appreciative patients, and, therefore, a constantly increasing clientele and enhanced professional reputation.

Pyorrhocide may be prescribed through druggists, and can be procured by dentists at quantity rates through dental supply houses.

“The Practical Method of Successfully Treating Pyorrhea” has been mailed to every dentist in the United States and Canada. If you have not received a copy of this original, interesting booklet, it is yours for the asking. Let us also send you, free of charge, “Pyorrhea, Its Causes, Effects, Treatment and Prevention,” scientifically exact and invaluable for the detailed information it supplies on the subject.

The Dentinol & Pyorrhocide Co.

World's Tower Building

110-112 West 40th Street

New York

**Do You Instruct Your Laboratory
To Use
JUSTI-TRUE-TO-NATURE
COMBINATION SETS**

All first class laboratories will gladly select the make of teeth you specify.

Most of them, however, carry a large stock of JUSTI TEETH.

They know from experience that a vulcanite case can be articulated with little or no grinding, when they use TRUE-TO-NATURE teeth.

Time saved means money saved to the busy laboratory.

Does it to you ?

They believe that the manufacturer designs incisal edges and cusps to aid in masticating the food, not to be ground away to obtain articulation.

Do You ?

In sending your case to the laboratory, be sure and send your instructions with the cast.

Laboratory pads for this purpose are yours for the asking.

H. D. JUSTI & SON

Philadelphia

Chicago

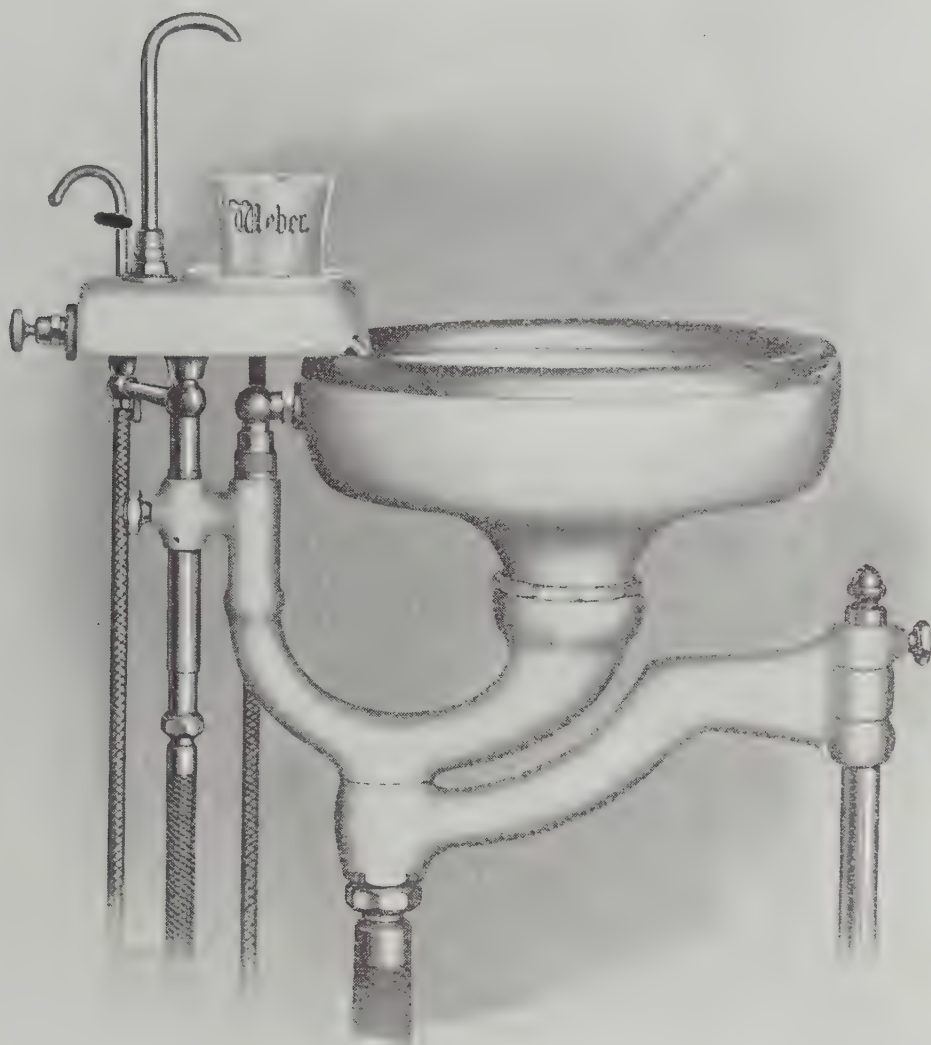
Some of the most discriminating men in the Dental Profession have been using Fellowship Crown-Bridge and Inlay Cement continuously for the past four years—THERE ARE REASONS FOR IT—and one of them, as told us recently in a letter, is the fineness of the powder.

The Doctor writes that he can get a closer adaptation, can set a better fitting inlay or crown with it than with any he has ever used.

IS NOT THIS WORTH SOMETHING TO YOU?
Is it not better to make your work fit perfectly and use a cement made with the powder so fine that it will not in any way interfere with your getting it in proper position than for you to allow space for a lumpy, coarse-powdered cement? THINK IT OVER.

Fellowship Crown-Bridge and Inlay Cement is the Strongest, Stickiest Cement ever manufactured.

LEARN TO SAY FELLOWSHIP.



THE WEBER No. 42
STATIONARY SPIGOT
The Weber Dental Mfg. Co.
Canton, Ohio, U. S. A.

The Weber New Model No. 42--\$42

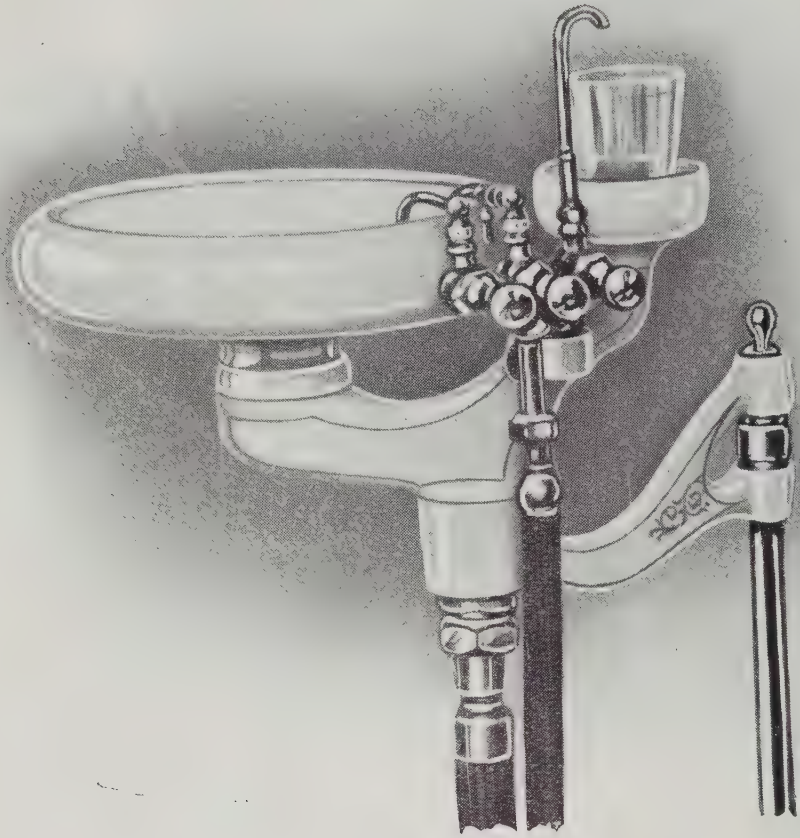
Pearl Opal Glass Valve Shield and drip cup combined.
New patented feature. Also Saliva Ejector holder.

Write for liberal **Exchange Offer.**

The Weber Dental Mfg. Co.
CANTON, OHIO, U.S.A.

The World's Largest Manufacturers of Fountain Cuspidors.

CLARK \$40 SINGLE

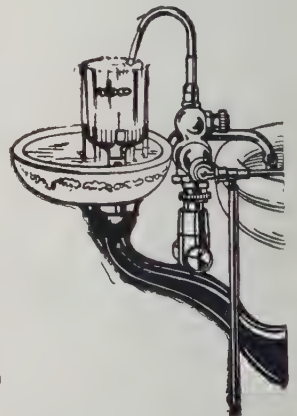


The Spittoon that is Putting **RUNNING WATER**
In Every Small Town.

SOME OF
THE
FEATURES

{ Lead Blown Bowls of many colors
Detachable Valves set offside
Silent Submerged Nozzles
Drinking Glass separate from bowls
Swiveling Double Waste Arm
Non-leakable Connections
Heavy Brass Castings

*Have you seen our Singles and Doubles
with the Finger Bowl Attachment?*



A. C. CLARK & CO.

Manufacturers

Grand Crossing

Chicago

DIMELOW TEETH



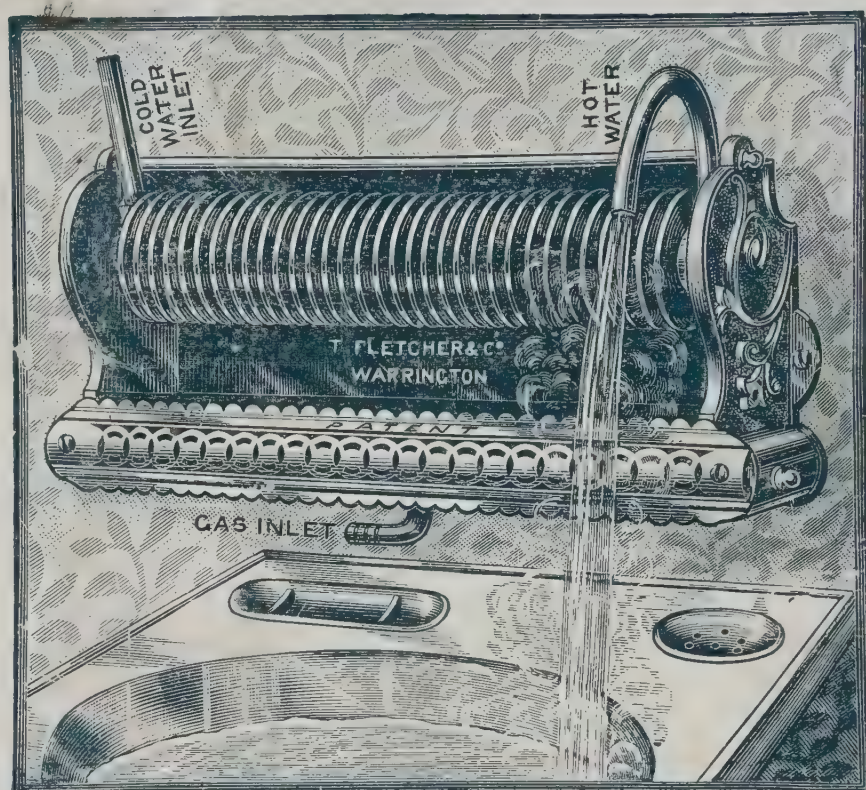
Will Give You Better Service

Write us direct or ask the
following Dealers who have
placed stocks in their Depots

PATERSON & PATERSON, Montreal
MARITIME DENTAL SUPPLY CO.
Halifax and St. John

Claudius Ash, Sons & Co., Ltd.

Instantaneous Water Heater



Now that the hot water supply given you by the building janitor has ceased, would it not be a great convenience to instal one of these heaters in your office or laboratory.

It gives a steady stream of nearly boiling water.

A $\frac{3}{8}$ in. clear bore gas supply is sufficient.

Plain	-	-	\$14.00
N.P.	-	-	16.00

Claudius Ash, Sons & Co., Ltd.

ASH'S
CANADIAN
MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

CLAUDIUS ASH, SONS & CO. LIMITED.

CANADIAN BRANCH,

11-13 GRENVILLE ST. TORONTO, CANADA.

MAIN DEPOT

LONDON, W. ENGLAND.





Beutelrock Drills

AS Sole Agents of Messrs. J. Beutelrock & Son of Munich, we carry in stock a complete assortment of these Celebrated Drills for both No. 7 Hand Piece and No. 2 Right Angle.

PRICE—Single	-	-	35c. each
1 dozen	-	-	\$3.60.

*Order now either direct
or through your dealer*

Claudius Ash, Sons & Co., Ltd.



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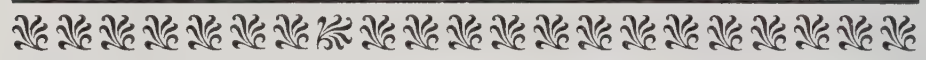
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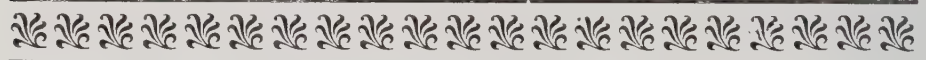
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The only time most men will
listen to advice is when they
are giving it - - - - -



Ash's Canadian Monthly Circular

VOL. IV.

TORONTO, JUNE 1, 1914

No. 12

A SIMPLE NASAL METHOD OF ADMINISTERING NITROUS OXIDE AND OXYGEN.

By JAMES H. HARRIS, L.D.S.,

Late Hon. Assistant Dental Surgeon and Demonstrator of Dental
Surgery, Birmingham Dental Hospital.

That the addition of small percentages of oxygen to nitrous oxide reduces the element of danger in anæsthesia by "gas" to a minimum is an old story.

Twenty years have elapsed since Dr. Hewitt put forth a simplified apparatus, perfectly adapted for producing anæsthesia with the mixed gases, and proved that the type of anæsthesia is preferable from the operator's point of view to that produced by N_2O only. But a glance at the history of nitrous oxide shows how tardily it has ever gathered friends. To an inherent conservatism only can it be that Hewitt's most efficient apparatus has never received the attention which it deserves, as the maintenance of the anæsthesia by using it with Paterson's nasal inhaler gives a result not so surely, safely or easily obtained by any other anæsthetic.

Safety is of primary importance in an anæsthetic for dental work.

The nasal method has in this respect an advantage over the "closed" method.

The administrator feels he must give the operator the best chance by going as far as he dare when the closed method is used; the operator can begin immediately the anæsthetic stage is reached if there be nasal breathing only, thereby economizing time and doing away with the "pushing" of the anæsthetic. Induction by nasal breathing is also far more comfortable to the majority of patients.

When using the nasal method for administering N_2O with O_2 , the stopcock (Hewitt's pattern for twin bags does excellently) must be held in some rigid support as near the patient's head as convenient, as the shorter are the tubes leading to the nosepiece the better.

Two tubes from the stopcock to the nosepiece are more flexible, and therefore easier to manipulate than a single large-bore tube.

While not favoring re-breathing, it is advisable to be able to utilize this in an emergency, therefore I have removed the two valves between the delivery and N₂O bag, retaining the valve in the O₂ tube to prevent diffusion into that bag.

The expiratory valve is fastened down with a cap. To be of any service an expiratory valve must be in the nosepiece itself.

After trying all sizes of rubber bags, I now adhere to a three-gallon size for N₂O and one-gallon for the oxygen—the latter for economy and reasons given later.

If required, a device for warming the gases can be used, and such additions or alterations as Ash's No. 4 Nasal Inhaler, instead of Paterson's, as the individual taste may desire.

Any stand operated by the foot will do.

One word of caution will not be out of place here.

The stopcocks vary in the delivery of oxygen.

The index is only an approximate guide to the percentage of O₂ which is being used, therefore the administrator must know his instrument.

If the operator wishes to be able to give oxygen only, a stopcock such as Weller's must be used.

In the accompanying illustration the sliding cut-off A above the nosepiece closes the delivery channel during exhalation and opens a passage into the air.

With regard to the administration, I will only touch on points which seem to me of special importance.

The routine of nasal administration of "gas" is familiar to all, and described in the text-books more ably than I can attempt.

Firstly, do not completely fill the oxygen bag.

If there is any distension of rubber, oxygen will be forced under pressure in considerably greater quantity than required in the early stages, and completely upset the result.

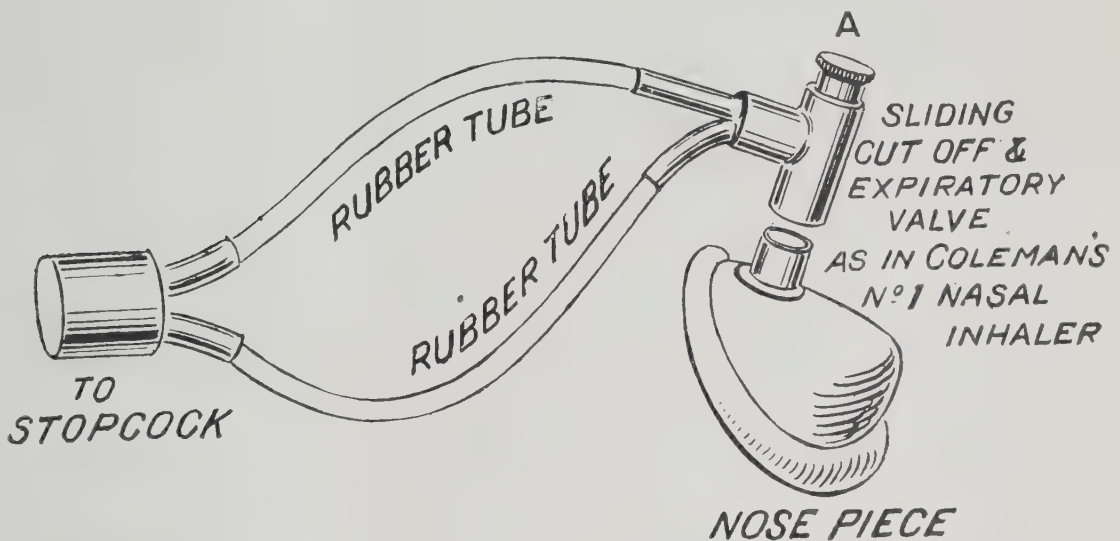
All preparations and precautions as for nitrous-oxide administration will be taken as a matter of course.

A mouth-prop must be used; the patient asked to breathe through the nose.

Begin by giving N₂O only, in the usual way, until the patient shows the slightest tendency to change color.

This for a merciful reason; the state of nervous apprehension is painful to most people from the time the nosepiece is applied until consciousness is lost, therefore let it be as brief as possible.

The oxygen is then turned on by moving the stopcock indicator to 1, and so on, slowly increasing, or, if necessary, slowly decreasing, being guided by the patient's color, always allowing that signs do not immediately follow. The effects of an increase in the dose of oxygen will not be seen for some seconds.



After reaching No. 6 or 7 on the indicator I prefer to squeeze the O_2 bag, increasing the O_2 supply in puffs, to opening up more channels in the stopcock.

Signs of anæsthesia are nearly as few as snakes in Iceland. Automatic breathing followed by loss of lid reflex, with eyeballs vacantly fixed, seems to exhaust this subject.

During the operation it is nearly always necessary to increase the pressure in the N_2O bag, also to look out for an addition of air to the mixture through mouth-breathing. The throat sponge, skilfully manipulated, is the best remedy for the latter, besides having other good qualities.

Recovery is usually slow. There is a decided condition of analgesia; sensations of pain not being felt until recovery is quite complete.

A brief résumé of my notes on 928 cases of nasal administration of N_2O and O_2 from March, 1909, till January, 1911, shows the first three attempts to be total failures, through admitting oxygen too soon and too freely.

Afterwards, the slightest alteration in the apparatus was reflected in the result of the next case, although with a little

management the course was kept and disaster avoided. The anaesthetist must not expect to take up a strange apparatus and straightway get the best results.

The anæmic and generally delicate patient was markedly good.

Vigorous men had to be kept in a state bordering on N_2O narcosis—that is, with slight darkening of color. The longest duration was ten minutes, and I found that it was necessary in most cases to reduce the O_2 supply after five minutes, probably owing to addition of air by the mouth.

The patient with some amount of nasal obstruction seemed easier to manage than the type who breathes through the mouth from choice, with a perfectly free nasal passage.

Two cases reached the anæsthetic stage and then recovered instantly owing to a rapid increase in the oxygen supply. Both proved afterwards that it was no fault of the anæsthetic when properly administered.

The usual type was an anæsthesia free from the choking and jactitation of N_2O , also from the slimy secretion of mucus which so interferes with the operation when ether is used, and could be maintained easily for a period long enough for most dental operations, such as extractions or extirpation of pulp, with comfort to the operator and without after-effects on the patient.

The same result is not obtained when N_2O is administered mixed with air; then, owing to the large percentage of air which must be admitted to prevent the onset of asphyxial symptoms, the border-line of anæsthesia becomes very narrow through the necessarily decreasing percentage of N_2O . When oxygen is used there is a very useful range between deep anæsthesia and the stage when the reflexes begin to act.

For the same reason (the larger percentage of N_2O that can be tolerated) the analgesic condition is more easily attained. I confess to a very limited knowledge of pre-anæsthetic analgesia. The induction is the same as when proceeding to anæsthetize, except that oxygen is admitted after the first breath of N_2O , and no mouth-prop is necessary.

I am unable to say with mathematical precision when the operator may safely begin; also the will and common-sense of the patient seem to play a very important part toward a successful issue. When patients begin to understand what can be done without their losing consciousness the greatest difficulty will be removed.

There is no doubt that general analgesia is most useful in the preparation of cavities which are sensitive, and for removal of the pulp, although in the case of children I prefer to go on to proper anæsthesia when the pulp has to be opened up.

I have used it on one occasion for impression taking, and on the same patient for taking the bite. He was an edentulous, ponderous alcoholic, who retched when I looked into his open mouth. My picking up a mouth-mirror from the bracket-table brought on fearful paroxysms. Mouth-washes had no effect; a spray was only a source of excitement. With scant hope I gave him N_2O , with up to about 3 per cent. of oxygen, to inhale through the nose and exhale through the mouth. After eight or ten breaths I was able to examine the mouth with a mirror, then impressions were taken, though not without a struggle. The bite was obtained in the same way. He finished the mastery of himself and the forthcoming dentures in the privacy of his own apartment. Whether this was analgesia, or suggestion, or what, is a problem I will not attempt to solve; it was sufficient for me that the end was accomplished.



Ash's Repair Facings

Made in the patterns shown in booklet which can be had on application, and supplied in sets of 6, sets of 4, pairs and odd.

The three sizes here illustrated are intended to show the distinctive feature to which we wish to draw attention, viz., the oval cavity in the back of each.

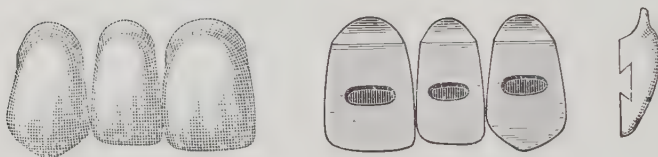
They can be used for repairing nearly every kind of denture; they are easily applied, exceedingly durable, and can be quickly fitted—it does not take longer than from 10 to 15 minutes to fit one.



83



71



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They are invaluable for repairs to Bridges, and in all cases of Plate and Crown work in which a flat tooth has to be replaced.

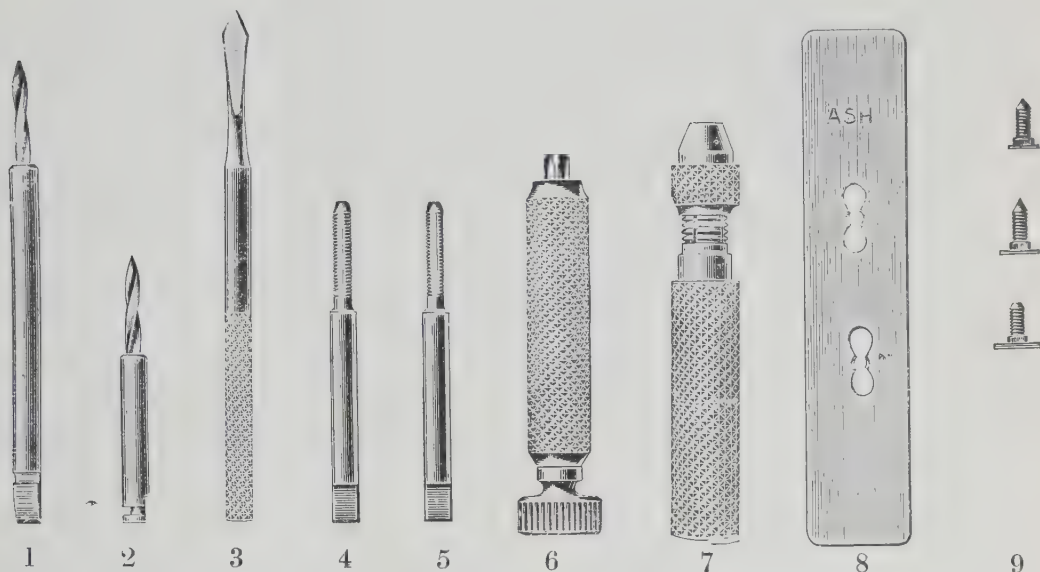
The oval cavity at the back of each Facing corresponds with the positions of pins in our Flat Pin Teeth. The Facings do not require backing, but can be applied to the backings of fractured or broken teeth when the broken portions of mineral have been removed from the backings.

IMPORTANT NOTE.

For attaching these Repair Facings to teeth backings, etc., we recommend our **C.A.S. Cement**, or our **Inlay and Crown Cement**.

Ash's Repair Facing Outfit

Suggested by MR. H. J. CORIN, L.D.S. Eng.



Figs. 1 and 2, Twist Drills for Straight and Right Angle for drilling hole in backing.

Fig. 3, Countersinking Tool for removing burred edge and countersinking the hole.

Figs. 4 and 5, Screw Taps, large and small.

Fig. 6, Holder for carrying Gold Stud and screwing it into position.

Fig. 7, Holder for carrying small and large Screw Taps, Figs. 4 and 5.

Fig. 8, Screw Plate for the Dentist's use in making his own Gold Studs, should he desire to do so.

Fig. 9, Small, medium, and large Gold Studs.

DIRECTIONS FOR USE:

In the event of a tooth breaking off a bridge or a plate and bringing away with it one of the pins, leaving the other standing in the backing, cut off the standing pin, grind the backing flat with a small carborundum point, drill a hole in the centre of the backing, remove the burred edge formed by the drill, with the countersinking tool, tap the hole with the small tap (Fig. 5), follow on with the large tap (Fig. 4); again clear away the burred edge with the countersinking tool, fix the stud selected in holder (Fig. 6), and screw it into position right up to the shoulder. The case is now ready for the Repair Facing to be cemented on the stud.

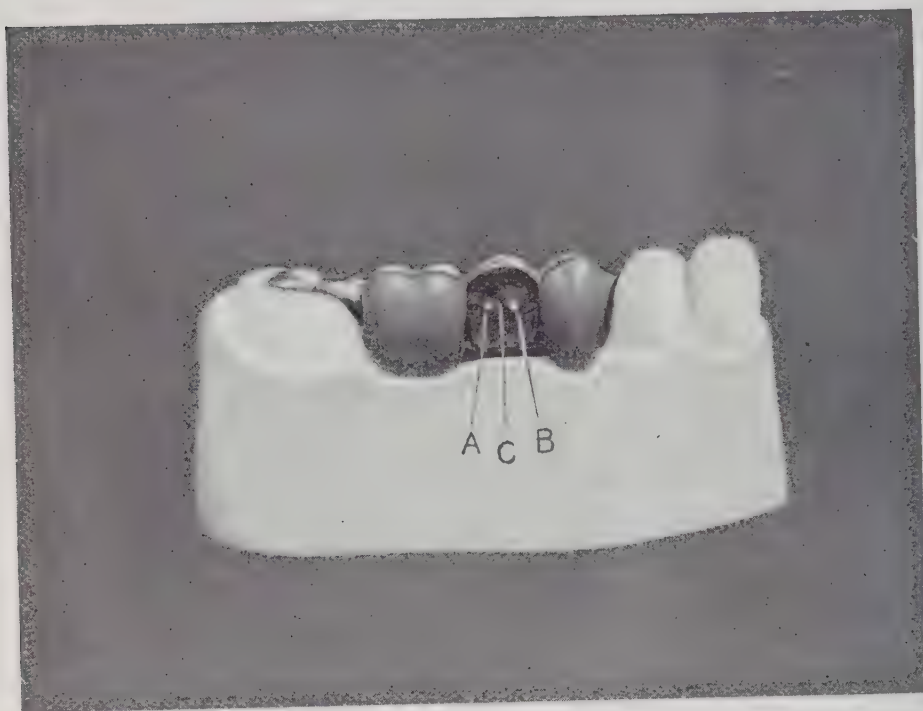
To cement a Repair Facing on the Stud.—Select a Repair Facing of the same size as the broken-off tooth, remove all traces of wax from it, thoroughly cleanse it and the backing with chloroform or pure alcohol; mix C.A.S. Cement or Ash's Inlay and Crown Cement to a thin creamy consistency, smear the backing and the back of the Facing with it, also fill up the undercuts in the oval cavity of the Facing, press the Facing to place, hold it firmly in position for four or five minutes, then trim away excess of cement and coat the exposed edge with Ash's Varnish.

NOTES.

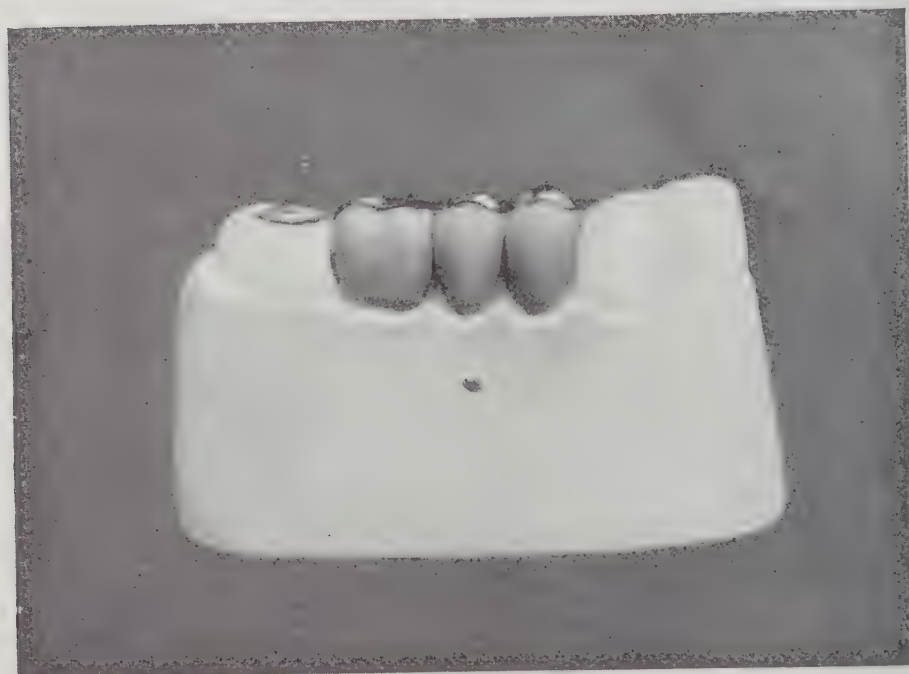
1. The method described above is applicable when both pins come away with the tooth.

2. Should both pins be left standing, in the space left by a broken-off tooth, a Repair Facing can be cemented on them.

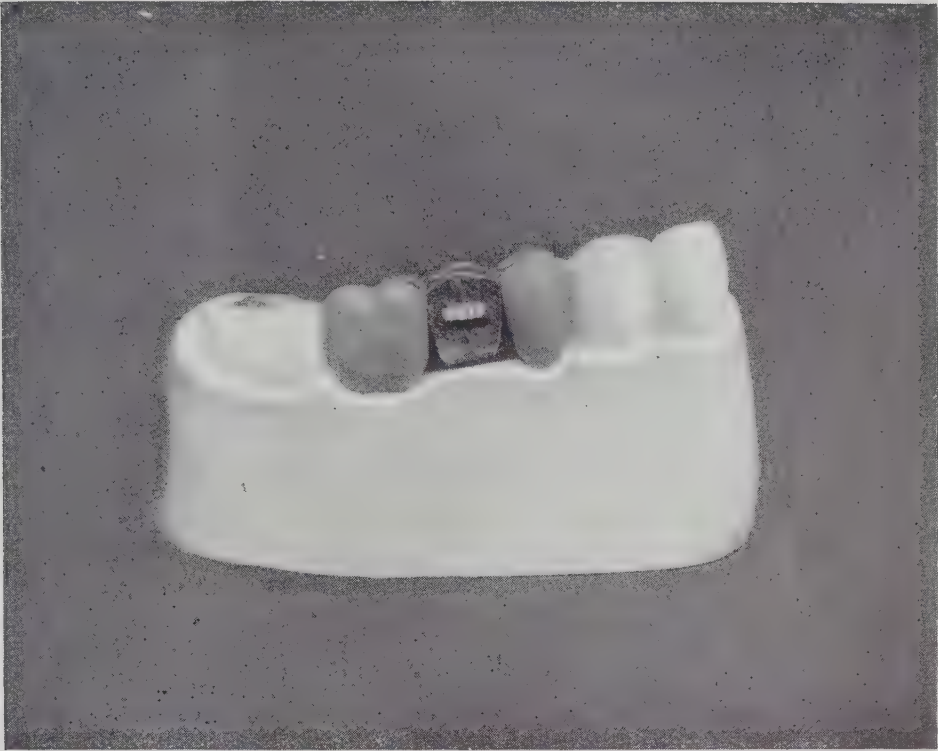
Ash's Repair Facing Outfit—*Continued*



A—Broken Pin B—Pin left standing.
C—Spot where new hole should be drilled and tapped.



Repair Facing cemented on to Stud.

Ash's Repair Facing Outfit—*Continued*

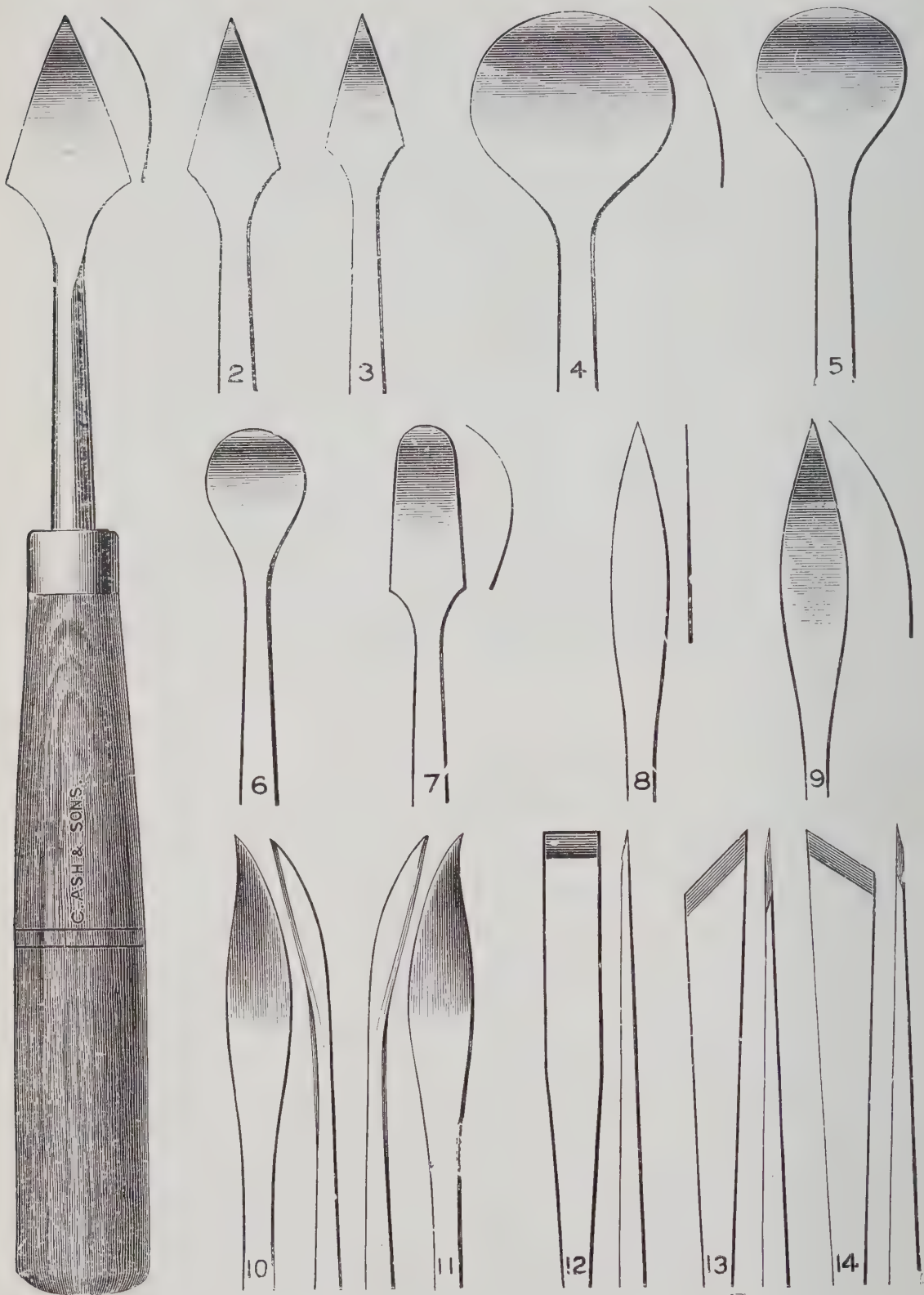
PRICES

Repair Facing Outfit as per Illustration	-	\$5.00
Repair Facings, each	- - - - -	.18
Extra Gold Studs	- - - - -	.40

Send a Mail Order NOW for one of these
valuable Repair Outfits and be ready for
the next case of repair : : : :

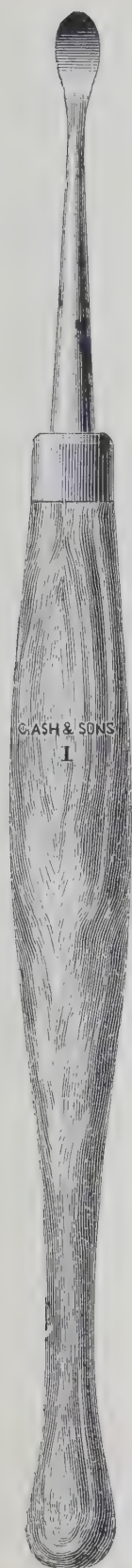
Claudius Ash, Sons & Co., Limited

VULCANITE SCRAPERS



PRICE, any size or shape, in wooden handle like Fig. 1 - 35 Cents

KINGSLEY'S VULCANITE FINISHERS



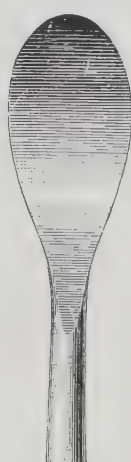
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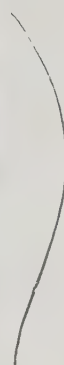
4



5



6



The illustrations show the full size of each blade ;
Fig. 1 shows the full length of each with handle ; and
the outline on the side of Fig. 6 shows the curve of the
blade.

In Polished Steel, with Wooden Handles

(Figs 1 to 6) each 35 Cents

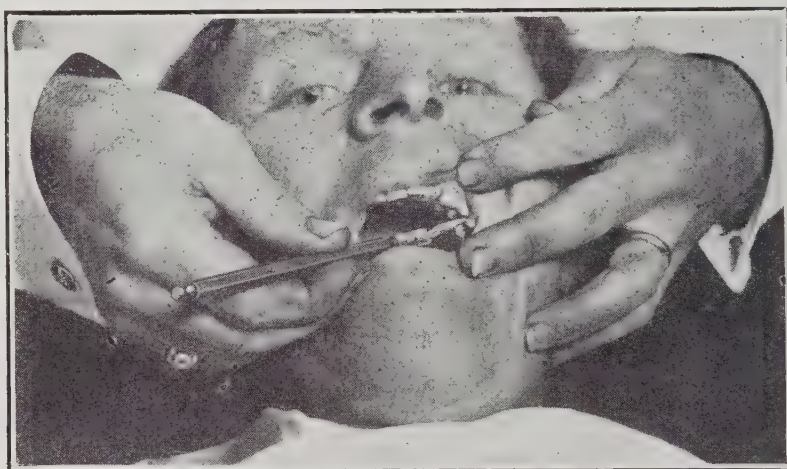
The Mosley Angle Holder

A New Instrument---One That YOU Need

This Angle Holder is equipped with five different instrument points that have been selected as the most useful for operations in the more inaccessible cavities.

Chisel, Burnisher, Approximal Blade, Broach Holder and Orthodontia Wrench

The holder is a positive locking device allowing the different instruments to be held at various angles and twists. The principle involved is a great advance over the old ball and socket fixture and ensures rigidity of the point.



The attachment for holding broaches and cleansers is the most positive of all holders, and allows of any length broach being used. Cut off the broach to the required length, being sure that enough of the shaft remains after it has been inserted in the attachment to engage with inside bottom of the screw socket. To remove, simply force the broach backwards through the attachment.

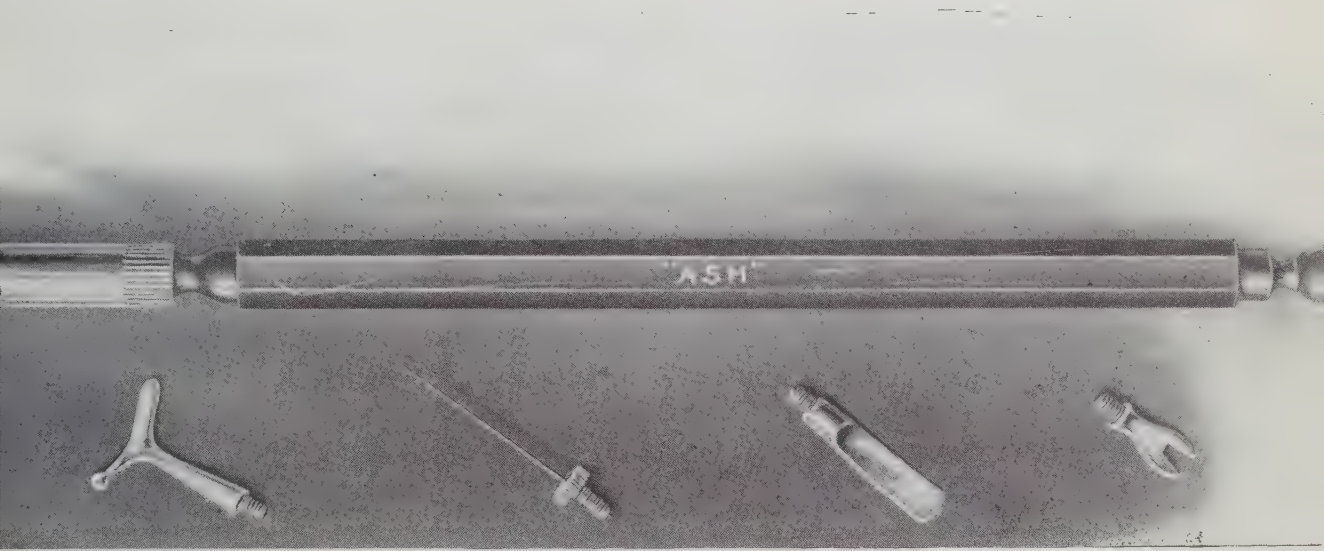
For Further Description see Opposite Page

The Chisel will be found most useful in operations on all posterior teeth, and is invaluable in preparing cavities for inlays in the distal surfaces of the bicuspid and molar region, heretofore inaccessible except with a burring instrument.

The thin approximal blade will commend itself to all practitioners for shaping up the wax form in the cavity and as an assistant in removing it, as well as being useful for burnishing plastic fillings.

The double-headed burnisher and approximal instrument is almost indispensable for all plastic operations.

The Orthodontia Wrench will be found invaluable to all those who practice the regulation of teeth. It allows the operator to adjust the regulating nuts, no matter at what angle they may be at.



In neat Cardboard Box \$3.75 complete

=====
Direct or through your Dealer

Claudius Ash, Sons & Co., Limited



You Need a New Agate Spatula

The Agate Spatula is the most important aid to successful manipulation of all Silicate Cements.

Ash's Agate Instruments were the first on the market, and have always been the best.

Double End Agate Plastic Instrument	- - -	\$1.10
Single End Agate Spatula	-	.70
Double End Agate Spatula with Double Head Burnisher	-	1.50

Claudius Ash, Sons & Co., Limited

Carter's Celluloid Strips



These are the first Celluloid Strips that were put on the market for DENTAL USE, and they are still the best although they sell at a lower price than others.

They are invaluable in Silicate Cement Work, and for Matrices.

THIN AND EXTRA THIN

PER BOX - 35 CENTS

Claudius Ash, Sons & Co., Limited

Ash's Leading Dental Rubbers

Pinks for Coating :

Gum Pink, Light				} \$6.00 per lb.
“ “ Medium	....	....	....	
No. 1 X	....	....	....	

Highest Grade Rubber for Base :

Dark Elastic					\$3.50 per lb.
--------------	------	------	------	------	----------------

Best Cheapest Rubbers for Base :

Orange					} \$3.00 per lb.
Red	....	....	....	....	
English Base	....	....	....	....	

Special Rubbers :

Soft Pink for Tender Gums,
Pink and Brown Repairing,
Pink and Brown Weighted,
White,
Combination Whalebone 1 and Black.

Full list of all the Rubbers we make sent post free on application.

A discount of **10** per cent. is allowed when 5 lbs. of our Rubbers are purchased at one time. This quantity may consist of several kinds of ours, but it does not apply to Rubbers of any other manufacture.

In ordering our Dental Rubbers be sure to ask for ASH'S.

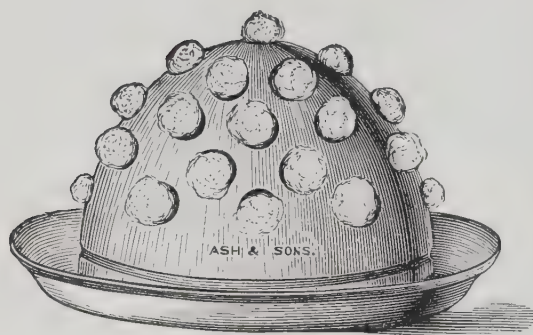
New Prices for Stent's Impression Compound

Per Box	\$.45
6 Boxes	2.50
12 Boxes	4.50
20 Boxes	7.20

This Compound is the most reliable on the market, and has stood the test of time. If you have not used it, send us a request postal for a sample.

Claudius Ash, Sons & Co., Limited

Cutriss Cotton Pellet Holder



The difficulty of picking up one pellet at a time with the tweezers, owing to the lightness and adherent nature of the cotton, is entirely overcome by the use of this holder.

A loose dome with a spring and screw pillar is fitted inside the outer dome so that the pellets are kept close to the holes, consequently the last pellet is as easily taken hold of as the first.

The holder is a well-made solid affair much different from many of the pellet holders offered for sale.

Price, heavily nickelled \$1.25

Claudius Ash, Sons & Co., Limited

Dall's Mineral Tips

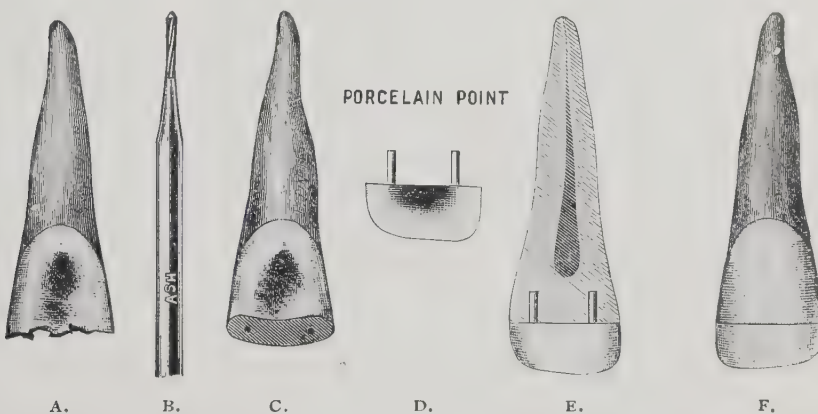
FOR RESTORING THE INCISAL EDGES OF UPPER ANTERIOR TEETH.

MADE IN SEVERAL SIZES AS ILLUSTRATED BELOW.



Singly - - - each, 35c.

TREATMENT OF A FRACTURED INCISOR WITH SUCH A TIP AS ILLUSTRATED ABOVE.



A.—The fractured tooth—palatal view.

B.—Drill for making holes for the reception of the pins.

C.—Prepared tooth ready for Tip—palatal view.

E.—Section of repaired tooth which shows position of pins in relation to the pulp.

F.—Labial view of finished tooth.

Dr. Galloway's Suction Device

FOR

Lower Dentures Only

*Patented in the United Kingdom and in
the United States. Other Patents pending*

Dr. Galloway's Suction Device has been specially designed for lower dentures, and the need of such an aid has long been felt.

Its practical efficiency has been thoroughly tested by lengthened wear in the mouth.

It consists of a curved metal bar which has countersunk holes in it, four pins for securing the bar to the plaster model, and a vulcanized strip of specially prepared rubber.

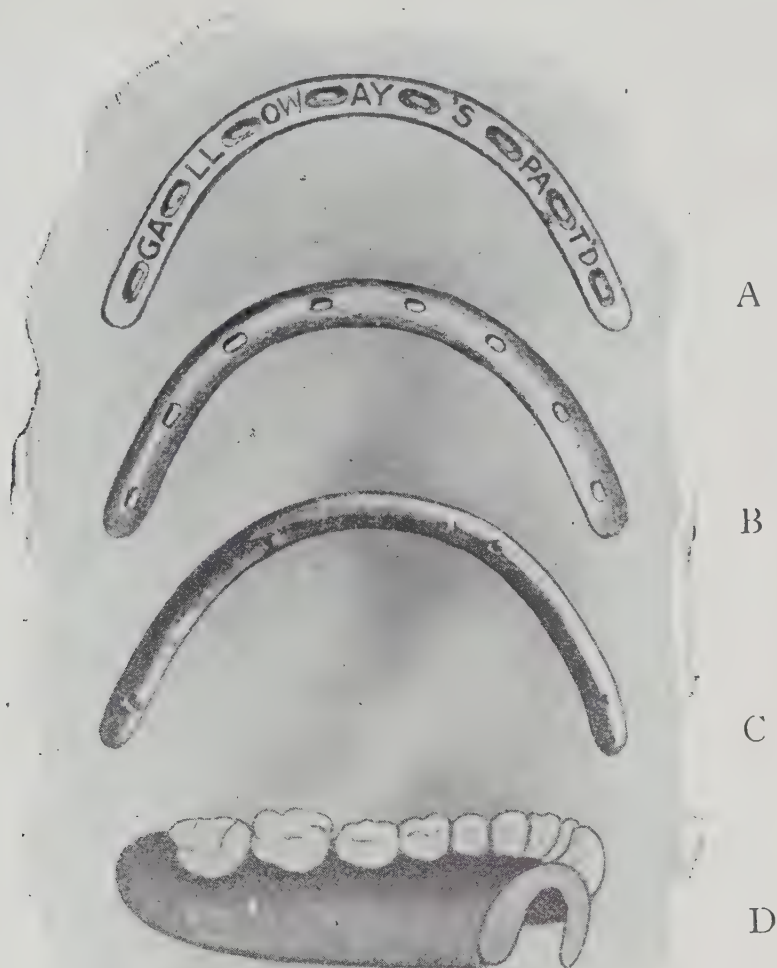
The rubber strip is held in position in the denture by the suction which is produced by the small holes on the curved surface, and to the gum by the suction through the larger holes on the flat surface.

The strip can be removed and replaced by the patient within half a minute.

There is enough suction produced, through the holes in the rubber strip, to hold the denture securely to the gum, without any discomfort to the patient.

Galloway's Suction Device—*Continued.*

FIG. 1.



Natural size.

A and B show the flat and curved surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Section of denture which shows the rubber strip in position.

PRICE - - - - \$1.00

Claudius Ash, Sons & Co., Limited

Rauhe's Improved Suction Disc for Vulcanite Dentures

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY,
BELGIUM, THE UNITED STATES, ETC.

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the head right home, and pack the hole in the centre with dental

rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded: the portion in which the pins are driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....each	\$ 1.00
per doz.	11.25

Aluminum-Alloy Stud with 3 India-Rubber Discs	
each	.50
per half doz.	2.50

Extra India-Rubber Discs, any sizeper doz.	.30
--	-----

Claudius Ash, Sons & Co., Limited
SOLE AGENTS

FOR SALE

- I Ash Long Range Chair
- I S. S. W. Chair (Extracting)
- I Clark Cabinet
- I Ritter Electric Engine, 110 v. 60 cycle
- I " " Lathe, 110 v. 60 cycle
- I Clark Fountain Cuspidor
- I Rubber Chair Mat

Price - \$375.00

A DENTIST SAID THIS

COREGA CHEMICAL Co.,
CLEVELAND, OHIO.

Dear Sirs:—

I want to say a good word for Wilson's Corega. It is great. I have saved myself many hours of worry on fit of plates by its use. One plate in particular that would not stay up when patient was eating, I experimented on and held it for 52 hours. I find greatest help in holding wax trial plates. It allows me to get a good articulation and adjust teeth same as I would like to have them in finished plate.

As long as it is made, I'll never be without it.

Yours truly,

February 14th, 1914.

(Name given on request.)

Prices 65c. and \$2.50

CLAUDIUS ASH, SONS & CO., LIMITED

WANTED—Graduate Assistant. Queensland. Good position,

I Lathe Head. Good condition	- - - - \$ 8
I S.S. White Engine Base with Upright }	- - - -
I S.S.W. Pattern Chair, Leg Base	- - - - 30
I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new	- - - - 60
I Davis Gasometer, less Face Piece and Tubing, excellent condition	- - - - 18
I Wetherby Suction Machine (new style), in A-1 condition	25
I Davis Gasometer	
I Mills Centrifugal Casting Outfit }	- - - - 25
I Olivian Swager	
I Large G. O. Cabinet. A-1 condition. A bargain	- - 60
shape	- - - - 55
I Ash Britannia Chair. Leather upholstery. A-1 mechanism	100
I Electro Dental Engine, Register All Cord, good condition. 220 Resistance Plates to reduce to 11 C.V. Price in- cludes Direct H.P. and R. Angle. Good condition	- - 60
I Davis Vulcanizer. Good condition	- - - - 10
I Leighton-Jackes Overhead Engine, 110 V., 60 Cycle	- 75
WANTED—Second Elgin Casting Apparatus.	

Collapsible Chair. State prices and condition.

Claudius Ash, Sons & Co., Limited

Phone Adelaide 1049

Wm. M. LAWRIE
DENTAL LABORATORY

Specialist in Crown, Bridge and
Metal Work Exclusively

57 Adelaide Street East
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FOR X-RAY WORK

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JAMES EMERSON HORNING, B.A.
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Osteopathic Physicians

Phone North 7138

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TORONTO, Ontario

Specialists in Dental Radiography

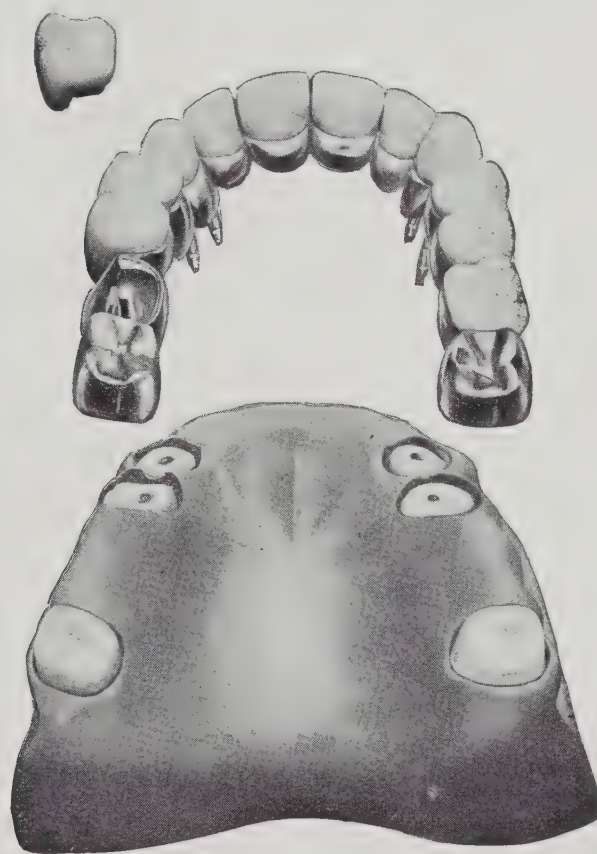
To replace a bridge tooth without rebuilding the bridge —

If emergency or accident demands, you can quickly replace a broken GosLee Tooth by cementing a new one in its place on the existing bridge.

With other bridge teeth, restoring of broken or missing members involves the rebuilding of the worn away gold backing or supporting structure. When it wears away again and the facing breaks off again, the annoyance is repeated *ad infinitum*. In bridges of that character, the "interchangeable" feature is a misnomer and is of no advantage because the restoring of a tooth does not remove the cause of the breakage.

**GosLee
TEETH**

are
interchange-
able
without
rebuilding



**GosLee
TEETH**

are
easily
replaceable

SEND FOR BOOKLET "D," AN EASY WAY TO SET THE GosLee TOOTH

Consolidated  Dental Mfg. Co.

130 WASHINGTON PLACE, NEW YORK

Specialists in removable and semi-removable bridge work.

Griswold, Morgan, Roach Bennett Bar, Fossum semi-removable and Gilmore attachments

Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

Ash's Swaged Vulcanite Dentures, Bar Lowers, etc.

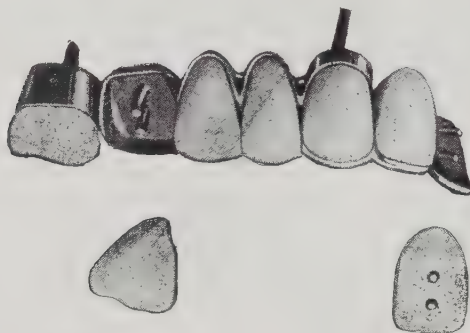
Chas. L. Daly

X. L. C. R. Dental Laboratory

ROOMS, 1, 2, 3, 4 @ 5,
11 GRENVILLE STREET
— TORONTO —

"Your impression **OF** me will largely depend upon your impression **TO** me."— C. L. Daly.

"Send good Plaster Impressions and correct wax bite and leave the rest to me."— C. L. Daly



The above cut illustrates the Dimelow Detachable Facings at **\$2.75** per Tooth, all porcelain posteriors

PARTIAL PRICE LIST FOR LABORATORY WORK:

Gold Crowns : Cen. Lat. Cus.	
and Bic. - - -	\$2.00
Molars - - -	\$2.25 to \$2.50
Bridgework : Anteriors per tooth	\$2.00
Bicuspsids - - -	\$2.50
Molars - - -	\$3.00 to \$3.50
Richmonds, extra - - -	\$.25
Facings charged extra at market price.	
Steeles and Dimelow interchangeable Facing and Porcelain	
Cusp. posteriors, per tooth	\$2.75
Richmonds, extra - - -	.25
Gold Cusps on posteriors extra	.50
Facings included in above prices	
Goslee and Dowel Bridgework per tooth - - -	3.00
Teeth extra	

Gold Inlays	
(Send wax impression packed in tissue paper)	
Casting only - - -	.75
Gold - - - - -	.05 per gr.
Rubber Dentures—	
Plate Work, \$2.50 to \$3.00	
(Partials \$2 00)	
Swaging metal plates (swaging only)	
Aluminium - - -	\$3.00
Gold - - - - -	\$5.00
Casting Aluminium plates (cast only) - - -	\$4.00
Gold Plates - - - - -	\$6.00
All teeth charged extra at market price	
Send impressions (unpoured) plaster preferred, for all classes of work including metal work.	

SEND A TRIAL ORDER.

SATISFACTION GUARANTEED

When you write, give full particulars of case and when wanted.
You will not be disappointed.

CHARLES L. DALY

YOU SHOULD USE WILLIAMS MAT GOLD BECAUSE



It makes the best fillings.

It saves time.

It is easier on the patient.

It is easier on the operator.

It makes better margins.

It makes densier fillings.

It does not rock, ball up, or crumble.

It does not need to be annealed.

All dealers carry a stock of WILLIAMS MAT GOLD and they are not afraid to recommend it because they know that there will be no troublesome "come-backs" on it. Try it and if you do not like it the trial will be at our expense.

All Dealers or

The Williams Gold Refining Co.

682 Main Street, Buffalo, N.Y.

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

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DURING THE PAST 54 YEARS

the firm of Johnson & Lund has devoted its best energies to the making of Teeth. Experts in the Art have been busy during this half century experimenting and testing along every branch of the science, with the result that in 1914 Johnson & Lund offer to the Profession the most Perfect Tooth—Strongest Porcelain, Faultless Pin and Best workmanship, Complete Assortment of Molds, the World's Largest Selection of Shades.

—ALL THESE ARE COMBINED IN—
K A Z A N
THE TOOTH OF SERVICE AT YOUR SERVICE

Tell Your Laboratory to use KAZAN

The experience of thousands of Dentists the world over proves that the full-sized, strong, tough Kazan pin offers the maximum of service that can be obtained in an artificial tooth. The men who use Kazan are coining the big profits of Satisfaction from the mint of Experience.

Tell your Dental Depot to Send KAZAN

Claudius Ash, Sons & Co., Limited

The Last Word in Dental Equipment

THERE isn't a dentist in the world who should not use an electric switchboard in his office if electric current is available.

We have been building dental switchboards for the past twelve years.

The "Type Ten" board is the outcome of two years' concentrated efforts of the most expert men in our organization who determined to produce a board that would not only meet any possible requirements of any dentist, but that would be as far in advance of any other board on the market as any other board is in advance of a blank space on the wall.

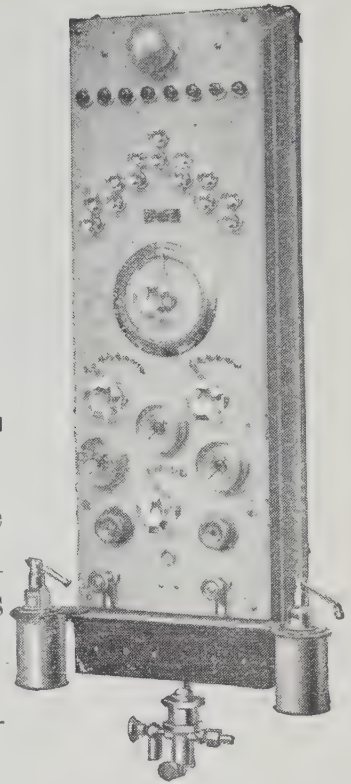
We have succeeded beyond our most sanguine expectations.

It isn't a case of whether you need a switchboard or not. If you have electric current in your office, that is an undebatable subject.

The only object of this advertisement is to induce you to send for our catalogue just off the press, which describes this board in detail,

After you see the pictures and read the description, it is up to you as to whether you prefer it or not.

Send for book today. It is sent FREE.



The Pelton & Crane Co.

49-53 Macomb Street

DETROIT, MICH.



THIS HANDSOME
**MAHOGANY
CABINET**

Contains everything
necessary for the
proper use of

**DE TREY'S SYNTHETIC
PORCELAIN**

This Cabinet with
contents complete
\$27.75

Cabinet and contents
when sold separately
\$33.25

*Order preferably
from us direct,
giving your dealer's
name and we will ship
to you and bill through
him.*

**The L. D.
CAULK CO.**

**Laboratories
MILFORD
Delaware**

Caulk's Synthetic Cabinet Equipment

\$27.75

This equipment comprises the following:—

De Trey's Synthetic Porcelain, 6 Half Portion, and Nos. 3 and 6 Full Portion Powders, with Liquids.....	\$18.00
1 Aseptic Shade Guide (for Synthetic).....	1.50
1 Set of Ivory Instruments and Agate Spatula.....	6.50
3 Sticks of Cocoa Butter	.25
1 Synthetic Glass Slab	1.00
1 Box Celluloid Polishing Strips (100).....	.50
2 Large Bottles of Synthetic Varnish.....	.50
Mahogany Cabinet	5.00

Total cost of these articles when sold separately..... \$33.25

Cabinet complete with above outfit **\$27.75**

The demand for this Cabinet is so great that we believe that soon every Synthetic user will have one.

There is a place for everything, and it invites neatness and precision. When a Synthetic operation is begun the Cabinet is brought out. It is a handsome piece of furniture, and makes the proper impression on the patient. When the operation is concluded, everything is cleaned and put back, ready for the next patient.

OPTIONS.

You may select the shades of powder you choose, or leave the selection to us. But in all cases the order must be for not less than 10 half portions.

You may substitute tantalum instruments for the ivory instruments at the regular prices for tantalum. Or you may substitute for the instruments and shade guide, if you already have them, additional Synthetic Powders and Liquids.

THE L. D. CAULK COMPANY

Laboratories, Milford, Delaware.

Canadian Branch—70 Bond St. - TORONTO

THE MEASURE OF VALUE

demanding in a dependable

Oral Prophylactic is exactly **Pyorrhocide**
provided in

BECAUSE Pyorrhocide removes daily deposits of salivary calculus that contribute to the formation of tartar, the breeding place of the bacteria of caries.

BECAUSE Pyorrhocide naturally stimulates blood circulation in the gum tissues—strengthens—revitalizes those tissues to more effective resistance to germ infection and multiplication.

BECAUSE Pyorrhocide neutralizes offensive breathfedor and promotes the antisepsis desirable in operating.

BECAUSE Pyorrhocide, by preserving in health the tissues surrounding the roots, insures permanent abutments for restorations.

BECAUSE Pyorrhocide, from its original, scientific combination of constituents, is a vitally important part of the consistently successful Dentinol and Pyorrhocide Method of preventing and treating pyorrhea.

BECAUSE Pyorrhocide is economical to the patient, a \$1.00 can outlasting the quantity of ordinary pastes and powders obtainable for the same amount.

BECAUSE Pyorrhocide produces results that insure satisfied, appreciative patients, and, therefore, a constantly increasing clientele and enhanced professional reputation.

Pyorrhocide may be prescribed through druggists, and can be procured by dentists at quantity rates through dental supply houses.

“The Practical Method of Successfully Treating Pyorrhea” has been mailed to every dentist in the United States and Canada. If you have not received a copy of this original, interesting booklet, it is yours for the asking. Let us also send you, free of charge, “Pyorrhea, Its Causes, Effects, Treatment and Prevention,” scientifically exact and invaluable for the detailed information it supplies on the subject.

The Dentinol & Pyorrhocide Co.

World's Tower Building

110-112 West 40th Street

New York

JUSTI U S T I

True-to-Nature Teeth

A tooth that is adapted to a SIMPLIFIED METHOD OF ARTICULATION should be your choice, when selecting teeth.

A tooth that can be correctly articulated with little or no grinding should be your choice, if you value your time.

Be sure and ask for

JUSTI TRUE-TO-NATURE TEETH
ANTERIOURS and POSTERIOURS

Cut this out and send with your next Case.

SELECT JUSTI TRUE-TO-NATURE TEETH for this Case.

Suitable Mold

Shade.....

Remarks :

D.D.S.

H. D. JUSTI & SON

Philadelphia

Chicago

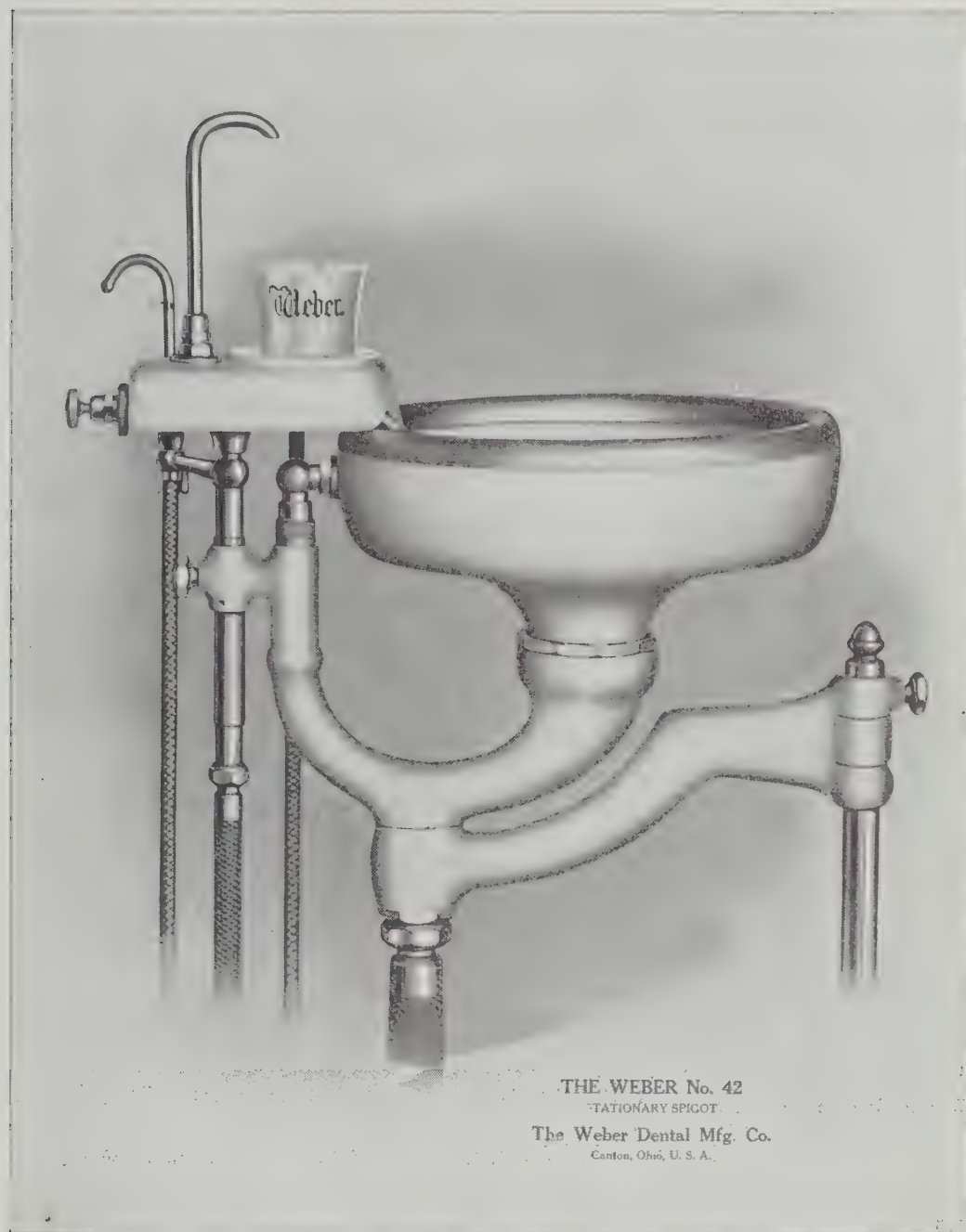
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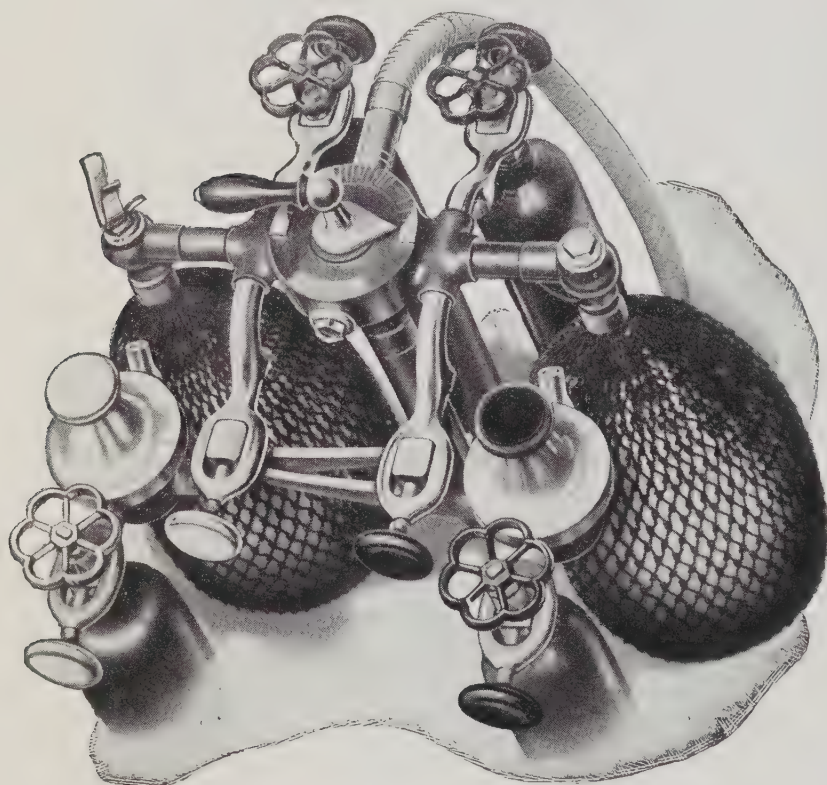
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